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DEPARTMENT OF TOXIC SUBSTANCES CONTROL

GREEN RIBBON SCIENCE PANEL

MEETING

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8:30 A.M.

EHLERT BUSINESS GROUP

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William F. Carroll, PhD, Co-Chair

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Michael P. Wilson, PhD

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Colleen Heck, Senior Staff Counsel

Radhika Majhail

Jeffrey Wong, PhD

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PROCEEDINGS

8:30 a.m.

CO-CHAIR CARROLL: All right, ladies and gentlemen, let's start working our way toward our seats, please. I would ask you as we're doing this to turn off the ringer of your cell phone unless you have a really cool ring tone. Whereupon I'll ask you to have it go off a number of times just for our own edification. But I'm looking out at the crowd and I don't think there are any really cool ring tones out there.

(Laughter.)

We have one other small wrinkle this morning. Your budding TV careers have been put on hold for the time being in that the webcast is down. You all look aghast. The webcast is down in the entire building so God only knows what the people out there are going to do for content this morning.

(Laughter.)

But having said that I think, you know, we're certainly working to bring it back up. Just so you know. Anyway, I've stalled for long enough to get Tim in the room and I guess we can then start. Radhika, it's all yours, please, for the ground rules.

MS. MAJHAIL: Thank you, thank you, Bill.

Good morning, everybody. I am Radhika, again here

with you to help you. And the good thing is that none of my information has changed. The bathrooms are still where they were last night, the exits are still the same and the cafe is still downstairs. So if you need any help either -- I can help you. You know, if you didn't see where the bathrooms were yesterday I can walk with you and show you where they are.

But for people who were not here let me just say to you the bathrooms are out the door to the left, past the Byron Sher Auditorium. Fire exits, one behind me, two up there. And the cafe is still on the first floor.

One important thing, we do not have a public comment period today so we won't be accepting any public comments from the public at the end.

The webcast viewers, as Bill said, they're missing in action for us right now. I'll keep Bill posted/updated. Whenever I hear that the webcast is up I'll let Bill know.

Other than that everything is nice. Let me -- one more thing. Break, there will be a break.

And then Bagley-Keene requirements still apply today as well so please keep that in mind. And I'll give it back to Bill.

CO-CHAIR CARROLL: Thank you, Radhika. I want to point out we have one substitution this morning in that Tod Delaney is here this morning. And we have had a couple of

members leave over the evening but it's substantially the same crowd.

Debbie, you have some comments?

DIRECTOR RAPHAEL: Thank you, Chair. Good morning, everyone. It's nice to see all of you back. And I just want to say that yesterday's discussion was incredibly helpful and fascinating.

When Odette and I sat back and said, okay, what are the questions that we really want to address with the Panel, of course we came up with a whole myriad of them. So we discussed with the co-chairs, if we have to limit it to three what would it be. And so we selected things where we had some angst, we had some question about it. We felt like we had done the best we could but wanted to hear a little bit more particular feedback. And in fact we got that wonderfully yesterday so thank you. We have been -- it's hard not to just want to run back and start debating and talking about these things. So thank you again for that incredibly helpful comment.

This morning is of particular interest because this part of the regs is truly new in the sense that we have a real challenge ahead of us. That intersection between practical and meaningful is a tough one. And so I am very much looking forward to your thoughts on how did we do and where we need to move forward. And I am going to let Bill

frame the issue a little bit more, I just wanted to express my gratitude for your dedication. And at the end we'll circle back when we talk about Next Steps.

CO-CHAIR CARROLL: Thank you, Director. I would point out to you that in your sheet that you received yesterday, Questions for Discussion. The question for this first period of time up until approximately 10:00 o'clock is the following question:

> "The decision was made to ensure quality for the AAs through: (i) DTSC audits; (ii) creating a certification program for assessors; and (iii) posting non-redacted portions of the AAs on DTSC's website for public review.
>
> "Given DTSC's limited resources, is this approach sufficient to provide meaningful quality assurance?
>
> "What steps could we take to restructure or supplement this approach?"

So I guess what it comes down to at this point is, points that you would care to make about alternatives assessment and particularly the process of generating them, shaping them up an dealing with the data are most in-bounds for this first session. Although in general if there are things that you want to contribute about AAs in this session

please free to do so.

Now, while you're thinking about that and while I'm waiting to see people's tent cards go up I'll also point out that after the break -- thank you, Ken -- we have one more session and that will be a general session. There are a number of things about the draft discussion regulations that we didn't have a chance to discuss yesterday. And so in that last hour and a half those things are in-bounds. I would ask you to consider not just things that weren't touched, and I have a couple of them myself, but also any indicative sort of remarks that you would care to make about the entire process, those are in-bounds as well.

All right, very good, thank you. We have at least a bit of demand for the floor and I'll take them in the order that I saw them. Ken, you're first then Mike Wilson and Julia.

CO-CHAIR GEISER: Good morning, everybody. This is kind of a ringer because Bill and I sort of said, well, I have enough concern about this area that I'll just pick it up to get us started.

When I reviewed the draft as it's presented now I was very pleased with most features of it. I had comments, which I sent to Debbie and the staff. But my greatest concern focused on this question, on this question about or issue about the way in which the alternatives assessment

quality would be assured by the use of outside staff from firms and from consulting firms, et cetera.

I've had a reasonable amount of experience with this line of program because the Toxics Use Reduction Program uses a form of this kind of idea which is sort of exporting or contracting out a certain part of the law to a private operation and trying to regulate and manage that operation in a way that both benefits the firms and the folks that are really to, in this case, do alternatives assessment, but in our case do what are known as Toxics Use Reduction Plans.

But on the other hand make sure that the -- there's good quality control and that the agencies that run the program in Massachusetts learn from what is going on and become more sophisticated in their own activity as they move along with the increasing knowledge that has been built up over the years of how to, in our case, substitute or reduce the use of specific toxics in production operations.

We today have in Massachusetts about, obviously a much smaller state, much smaller, we have about 550 reporting entities. We have licensed about 230 what are called Toxics Use Reduction Planners. They used to be called, by the way, TURPS, but they all hated that term. And for those of you in the medical community, they know that stands for something else.

But they are very much a part of the program. The way you become a Toxics Use Reduction Planner is you go to a training program which is run by the Institute. It's a reasonably long training program. It lasts -- it used to last about ten weeks, it lasts about five and a half weeks I think at this point. You then sit for an exam which is provided by the state.

And then once you are licensed or certified you need to accumulate a certain amount of continuing education credits to be re-licensed every two years. And one of the easiest ways to get those credits is to come to the annual conference of the Toxics Use Reduction Planners where there are a whole series of workshops which they can take to advance their knowledge and also gives us, the people who run the program, the chance to really meet with them, learn from them, hear what's going well, hear what's not going well, learn about new technologies. And all of the kind of general learning that has really built the program into being a sophisticated program.

Now that can't be translated directly into California. California is much larger. It's really -- planning is one thing, alternatives assessments are another thing. The Department doesn't have the resources that we have even in a relative way for managing the program because we actually have a fee structure that actually supports the

program and this legislation did not provide a fee structure. So, you know, the Department is much more constrained.

But I will say a couple of things about what I am concerned about with the plan that has been put forward in this, in this version and also make some recommendations of what I think can be done in this context.

I am concerned that there is going to be too many accrediting bodies and that they are going to be accrediting a lot of assessors who are doing wildly different things. They're going to get trained, obviously, by these accrediting bodies but the Department has little to say about that training. They are actually going to be certified by the accrediting body, not by the state.

And they will be doing their work -- and the way in which the regulation at the moment sets up very good qualifications for both the accrediting body and the assessors, which I would call input kind of criteria but no output criteria that is to really examine whether an accrediting body is actually performing its function well or that the assessors are performing their functions well. There is no way to have accountability back other than the checking of the alternatives assessment.

And the alternatives assessment. Maybe there's going to be a few. I think there's going to be a lot.

Which means the Department is going to be not only dealing with the responsibility in a short window of time of basically approving or disapproving a large number of alternatives assessments but also really trying to deal with the variable quality and in a situation of having to reject a bunch because they didn't meet the standard and then trying to deal with the rejections and learn why.

Was it because the accrediting body wasn't doing the proper training? Was it because it's just the distance between the Department's obligation to run a sophisticated program and the actual work of doing the alternatives assessment is so long, the arm is so long, that I'm fearful that it's going to be very burdensome. And there's going to be a lot of embarrassment in the sense of firms getting their alternatives assessment rejected when they thought they were doing the right thing. I'm just really concerned this is a weakness in our program.

And I can say a few other things. Of course the idea that the alternatives assessment will be put up on the web with redacted parts for the confidential business information as one way to check quality. But I'm concerned about that because either some firms are going to redact everything and it's going to be really embarrassing and all or there's just going to be an unwillingness to really make the alternatives assessment very sophisticated because

people know it's all going to be revealed. So the incentive is to not say very much because who knows what somebody is going to say.

The audits I think are a good idea but for a well-funded agency. I'm worried that out of the things an agency strapped for resources would cut its audits. It would be the thing you would most likely think about. So I'm worried. I think we need a different approach here.

So let me suggest a couple of ideas. First of all let me just say, I am not a fan of the third-party certification that was in the earlier version. I think this version could work with a few, a few minor adjustments or a few adjustments I would suggest.

One is I think that the number of accrediting bodies should be limited to like maybe four or something like that and have people compete for the right to be an accrediting body for the state. But that would create a more cohesive group of accrediting bodies so that the Department can work with them to really make sure that everybody is in alignment.

Secondly, clearly accrediting bodies are going to charge fees to do the training and to do the certification. I know this is not in the law but should any of that be passed back to the Agency so that the Agency actually has some revenue off of this to actually be able to do anything

with it? There's very few places where there's any revenue-generating capacity. But somebody is going to make money off of this, if nobody else than the assessors themselves are going to charge a fee to do an alternatives assessment. And how are those fees going to be structured? Is there going to be a lot of variation in those fees, are they going to be undercutting? I mean, yes the market is great but the market can also do perverse things so I'm worried about that.

The second thing I would think about is the exam for certification should be a common exam, which the Department works with the accrediting bodies to develop so that everybody is being examined to meet the same qualifications. We use a narrative exam in Massachusetts, which kind of creates case study problems that an assessor would have to face, as a way to see whether they get not only the kind of words of the laws but also get the spirit of how they actually would perform in making an alternatives assessment.

I think that there should be some kind of -- now this doesn't have to be in the regs but I would hope there would be a conference, an annual conference of assessor or accrediting bodies on assessors such that there is a major place to meet and talk about people are learning so that there's really, that it really empowers both the assessors

themselves but also the Department in its knowledge about what's going on.

I think those are some of my thoughts about it. And I think this could work but I think it needs to be tightened in making its way. So those are my thoughts.

CO-CHAIR CARROLL: Very good, thank you, Ken. Mike.

PANEL MEMBER WILSON: Thank you, Chair. I had a number of similar concerns around professional accountability and educational standards and certification and licensing, if you will.

It's similar in ways to industrial hygiene and safety engineering education that has now developed a field of professional practice that, as Ken is saying, includes a standard body of knowledge that everyone understands is part of that professional field. I have a point but first I have a question for you, Ken. For the 230 Toxics Use Reduction Planners, who do they work for once they have completed the program? Are they part of the companies? So companies send them to the educational program?

CO-CHAIR GEISER: Originally there were two kinds, there were so-called in-house and out-of-house. In-house were in the companies. They did not have to go through the same training. Today many companies send their in-house people to it so it's a little hard to describe the exact --

Some are in-house private consultants.

PANEL MEMBER WILSON: But then the state of Massachusetts issues the certification?

CO-CHAIR GEISER: Yes.

PANEL MEMBER WILSON: Okay, great. So one of the things that we're involved with with your sister agency, the labor and employment agency, is a process that California went through during the later half of the Schwarzenegger administration where they essentially contracted out the process of training contractors for public works projects. There are tens of thousands of public works projects across the state that are, you know, that occur within school districts and fire districts and all the state and local agencies and so forth.

Every contractor that wants to bid on that project needs to understand a large body of labor law, Cal-OSHA regulations, wage and hour issues and so forth that sometimes can be unique to those districts and everything else. It's a fairly extensive training program that these contractors need to go through.

That process was privatized and externalized, if you will, by the Schwarzenegger administration, in part because the Department of Industrial Relations was having, was overwhelmed with training needs and they recognized that their ability to communicate effectively to these

contractors was not up to standard. They essentially had a checklist that contractors certified that the understood all Cal-OSHA regulations and so forth. And they wanted to increase their capacity to do that, the DIR did.

It turned out that that process became -- lacked accountability, it lacked transparency. The Department didn't have the ability to track the quality of the training across the state by multiple kinds of contractors. Now just a month and a half ago the Brown administration signed a new piece of legislation that returns all of that work back to the Department of Industrial Relations.

Now DIR is developing a standardized training program that then gets rolled out across the state that will go to what are called awarding bodies who will be trained in a standardized way. But then there's accountability and auditing and so forth so everyone from, you know, Tulare County to Imperial County understands a similar body of knowledge. And there's a standard training criteria and professional standards and so forth.

So that's -- it's a useful lesson in something that we have been through over the last eight years or so around -- some think it's sort of similar. And so my, I guess, my concern of this was very similar to Ken's around the accountability around professional standards, educational criteria and continuing education advancing the

knowledge that this is an evolving field. And it's going to have new science that's useful, applicable every year and we want to be able to communicate that to the assessors. So, that I think, is just an overall concern that those aspects need to be improved.

You know, I share the concern around the fee structure issue. That, you know, through the Center for Occupational and Environmental Health at UC Berkeley we run continuing education courses for industrial hygienists and safety engineers and so forth. And we charge for those, you know, to keep the operation running. And so it makes sense to me that this would be, that the training can and should be a fee-based structure and that in some form that could help support the program within DTSC. Thanks, Chair.

CO-CHAIR CARROLL: Certainly, go ahead.

DIRECTOR RAPHAEL: So Mike, do I hear you say that you are recommending that we do not use external bodies?

PANEL MEMBER WILSON: No.

DIRECTOR RAPHAEL: I heard your fears but, you know, in the example that you gave. What would thinking about -- I mean, I didn't hear that recommendation from Ken so I'm just curious.

PANEL MEMBER WILSON: Do you mean in the -- you mean external bodies who would be sort of assessors.

PANEL MEMBER JOHNSON: Accreditation.

PANEL MEMBER WILSON: No, I think it makes sense to -- external being members within companies who would become trained in alternatives assessment.

DIRECTOR RAPHAEL: No, I'm sorry, I just -- it sounds like by your example that you feel like it's a fatal flaw perhaps to contract out the accrediting body concept, that it really should be within DTSC. And that the fees should then all come to DTSC rather than contracting out the accrediting body function.

PANEL MEMBER WILSON: I see. I didn't quite state that. I don't think it makes sense for DTSC to try to mount this entire training program and train DTSC staff to do alternatives assessments across the state of California with all these businesses, that doesn't make sense I don't think.

My example with the Department of Industrial Relations was they set the standards for training, they provided the vehicle for accountability and professional standards. The trained the trainers and they contract out for training of trainers. And those trainers adhere to a set of standards that everyone recognizes. And there are professional criteria if you want to be -- if you want to work with the state of California on public works projects you can go through this training and you can, and you can take on that responsibility. But it's much more accountable. And there are professional standards and

guidelines and curricula, actually.

CO-CHAIR CARROLL: Very good, thank you, Mike. Julia and then I have Meg and Bob.

PANEL MEMBER QUINT: I agree with much of what Ken and Mike said. I think the uneven part of all programs like this is the training. And even if you have a robust certification program it will be uneven in terms of what comes out the other end. So in other words, the AAs performed by the certified assessors, even after they have been examined and passed the exam, it's going to be uneven, it's just the way it is.

I would like to see more emphasis placed, and part of this is a clarification question. There is a review by DTSC of the AAs from the front end. You know, it's the report and you're monitoring the AAs. Am I correct in that, that's written in? I don't know how, Odette.

CHIEF DEPUTY DIRECTOR MADRIAGO: Oh, I couldn't tell if you wanted a response or not.

PANEL MEMBER QUINT: Well yeah, please, because that is going to be predicated on what I say to that.

CHIEF DEPUTY DIRECTOR MADRIAGO: I don't know from the front end. We will be looking at the report, the preliminary report, final report, for, you know, consistency with the regulation. And we will be doing back-end audits. I think it will be in the audits where we will do a much

deeper dive than we will in the reports themselves.

PANEL MEMBER QUINT: Okay, because that was my point of confusion. Because I thin the hard part about an alternatives assessment that we link in all of this is the amount of expert judgment you have to do in terms of the assessment of the toxicological, you know, the data. There is scarce data involved and, you know, the data are not particularly good for a lot of chemicals, it's missing. And there is a lot of expert judgment involved in whether or not you deem something, you know, safe or not safe, you know, regardless of the evidence criteria that are in the hazard traits regulation.

So I think, you know, if DTSC is going to put resources, if there are resources to be had or found anywhere, I think it would be wonderful to have some assistance. Because you will be looking at all of these AAs. For products there will AAs on, you know, the same products by different companies.

And, you know, waiting until people have gone through all of this work -- as Ken said, it's going to be very disappointing when they put their best effort forward, they trained assessors and they're certified and all of that, and then, you know, because of the weakness of the science and because it's just the way toxicology is, we don't have a lot of answers, we don't have a robust data on

all of these things, I think it would be much better to start flagging things at the front end rather than the back end. Even when you do audits.

I mean, it will make everything -- and DTSC will learn from this process. You will learn the difficulties with, you know, alternatives assessment from all of these various -- on different products made by different people and how people do them differently. So, you know, if by some magic wand we could have resources in addition to the accredited bodies and all of that, I would try to get some assistance with, you know, looking at things as they come in, both the preliminary and the final report, and catch inadequacies there.

CO-CHAIR CARROLL: Thank you, Julia. Meg.

PANEL MEMBER SCHWARZMAN: Thanks, good morning. I have heard a lot of things that are really, that I would generally just completely agree with and it's helped me realign how I'm seeing this and so I can say in general I agree with what I've heard from Ken and Mike and Julia. Which makes me thin about a resource that the state of California has already that I think meets all these requirements, which is the UC Extension Program.

For example, so UC Extension has very much the structure that we're calling for in the accreditation bodies. Not as the assessors but as accreditors. They're

used to developing professional education programs, certification programs. They're connected to campus. Several people in this room sit on the advisory committee to UC Extension in developing the curriculum for their green chemistry certificate, which they have been developing over the last few years. So they have access to professors and researchers on campus for developing curriculum.

But then they have the structure and the experience with providing the professional education and granting certificates and all that and they have a fee structure and I can easily see how that could be -- I think the suggestions are excellent that that -- some of those fees obviously support, which is the UC Extension model, supports the development of the curriculum and the offering of it. But that maybe also goes back some to DTSC to help fund the evaluation, ongoing evaluation of the accreditors and potentially the auditing of the assessments. So that seems to me one vehicle for how to accomplish this in the state is through the UC Extension program or the whole infrastructure.

And then there's two other things, two things about that. One is that there was something that I saw that was really excellent in here that was clarifying that the accrediting body should have no economic interest in the outcome or who gets certified as an assessor or all of that.

So I think that's accomplished by using the UC Extension. And I have no financial stake in the UC Extension. They don't employ me; I volunteer my time on their advisory board.

And the other thing is, I then think about the next stage of implementation which is designing the training and the accreditation program, and that's what Julia brought up issues about. And I can see a natural connection between the design of the curriculum and the AA guidelines that the Department is going to create. So the Department thinks about "will be" in developing the guidelines or the guidance documents. The AAs they want to see. And then from there the guidance documents that will create the kinds of AAs that you need. And from there we work backward to the accreditation curriculum and exams and that kind of thing.

And I like Ken's idea of an annual CE. And that's all consistent with the kinds of programs that UC Extension already runs. I'm not just talking UC Berkeley but, you know, UC Extension statewide.

I also wanted to make one comment in the description of the qualifications of accreditation bodies in the regulation,, which is page 60 of the current version. And that is (a), the very first section there says that the accreditation body needs to have on staff one or more individuals that possess all of the following. So "all of

the following" is a good list.

But coming from the medical profession I can say that there are some situations -- for example, in overseeing nurse practitioners there has to be a physician who ultimately is accountable for everything that a nurse practitioner does. And so the presence -- including every prescription written and every treatment given or not given. And I have at times served in that function and I have at times turned that function down because I felt like I didn't have enough -- there was going to be too much independent operation and I didn't want to be responsible for all of the prescriptions written by the nurse practitioners in that organization.

So I don't think it's enough to say there must be one person on the payroll of this organization that has these qualifications. There also has to be a structure for involvement of that person and their expertise in the actual functioning of the organization.

CO-CHAIR CARROLL: Thank you, Meg. Bob.

PANEL MEMBER PEOPLES: Thank you, Chair. First I want to speak to the question, and in general start by saying, yes, I think this is a good place to start. I think a lot of very complex issues, concepts, ideas and challenges have been distilled into a reasonable road map to get this process off the ground. I think you learn as you go.

A few questions and comments along the way. First in the, in the introduction to the question the posting of non-redacted portions is mentioned. Do you have established guidelines for what and how you go about redacting information to guide that process?

MS. HECK: Yes we do, we have both the substantive rules that had come out of the -- California has adopted the Uniform Trade Secrets Act. So there's this whole body of law that's grown up around what may be claimed as a trade secret. And in addition we've set up what I would just call, modest housekeeping rules. For how when claims of trade secret protections such as prominently marking each page on which the provision is claimed to have come under the privilege, et cetera.

The trade secret article itself in these proposed regs you'll see runs a whopping total of three to four pages and one of those pages has to do with how one justifies the claim. The level of evidence or facts that are required to show that in fact the material has been treated as though it is distinct from everyday business information.

PANEL MEMBER PEOPLES: Okay, thank you on that. And I guess just from a philosophical point of view, I think part of this exercise is to raise the bar. So we need to challenge ourselves to think about how we can provide more transparency in the process while still respecting

legitimate claims for CBI. I think it's been mentioned by this Committee on numerous occasions, modern analytical technology makes it possible to pretty much figure out anything and everything that's in anything in a relatively short period of time. So some of those claims are based on past precedence that probably wouldn't stand the test of good science today.

So let me move on and ask you also a clarifying question here on -- let's see. Let me get to the right spot here. I'm looking at page 7 of the summary document, 7 of 16. Where the third bullet says -- sorry, the second bullet says: "(ii) Dispersed as an aerosol or a vapor." My question is simply, is this meant to include, since it speaks to formulated products, the concept of spray cleaners for surfaces, kitchens, commercial food prep services and that? Because you have a separate, a separate bullet (iii) that applies to hard surfaces with the likelihood of runoff or volatilization. Which to me is an outdoor application consideration.

CHIEF DEPUTY DIRECTOR MADRIAGO: I'd have to think about that. Maybe there's some overlap in those two.

PANEL MEMBER PEOPLES: Well, so my only suggestion would be that if there is any confusion to help minimize it you may want to include something about surfaces in the second bullet, okay.

Let's see. I wanted to go back to some of the discussions about the AA accreditation. First of all I think some of the things that Ken outlined and I think that Michael built on are very positive. This old idea of TURPs, sorry to use that name because I don't remember the new one, I think is a reasonably good one. Probably the nomenclature needs to get changed a little bit.

I want to bring up in the context of that certification process and the submission of data a thought that I offered a couple of meetings ago. And that is, at the end of the day when these things are submitted for review, I think it makes a lot of sense to have an officer of the company sign the document. That adds an element of review expectation that things have been done thoroughly, completely and consistent with the spirit of the regulation that we're trying to implement here.

One more comment and that is on page 6 of the Attachment 2 in the summary notes that you provided. It talks about availability of information that is necessary to substantiate potential adverse impacts and exposures. It has been referred to many times but, you know, what is the consideration for how to handle a lack of information? Which in my mind is probably going to represent the majority of the cases in many of these chemicals of concern. And to simply say there is no information, therefore there is no

basis for a judgment is probably not acceptable in the spirit of what we're trying to do here going forward.

I believe I read that one of the regulatory responses is to request additional information. And with a request like that I think there needs to be consideration of who and how that gets funded. And the answer to that is probably fairly obvious. And also how long it takes to generate that kind of information because some of these studies can be, you know, rather long-term and what does that do to the timing of the cycle for, you now, the alternatives assessment that is taking place. And Mr. Chair, I'll stop at that point.

CO-CHAIR CARROLL: Thank you, Bob. I have Jae and Tod and I'll take a turn at that point and then Kelly.

PANEL MEMBER CHOI: Thank you, Chair. I have a couple of comments and suggestions I'd like to make. I think Mike and also Ken about this -- Ken's idea about the limited accrediting body versus external and internal sourcing. Having a limited body, accrediting body, I think is one of the best ways to prevent so-called -- the concern that Mike expressed from, you know, the former administration.

Because I'd like to take some examples of like states where Indiana or the city of Indianapolis, you know. They have been doing this external, not only auditing but

also even nowadays highway infrastructure is really outsourcing rather than, you know, by federal government and/or state government. So there is examples of how successfully run this kind of credit for accrediting body.

So I'd like to consider DTSC should have some control of limiting the number of accrediting bodies. In doing so I think we can increase the transparency as well as the efficiencies of controlling the accrediting bodies.

The second comment I have is some concern of -- Ken made remarks in terms of so-called surprising effect from the party of applicants or the companies. Without updating the status of progress of their assessment of the chemicals of concern in their product or formulations.

I'm not sure what the DTSC is considering in terms of this website utilization. As a private company we deal with a lot of custom escalation, for example. And one of the most complaints from customer point of view is that we as a company, if we don't update them, the progress of their escalated issues or problems. Although they do not expect, you know, we deliver the solutions every issue and complaint they brought up. But important thing is really update the customer the status so that where they really stand their applications.

So when you design the website, probably include so-called on-boarding or updating checklist. Very short, it

doesn't have to be -- because you have structured it very well the way that I read. But it does so that automate the update information goes out to that particular customer, in this case Applicant. And you can update it. You don't have to wait 180 days or 12 months or whatever. But at least automated message going out saying, okay, where you stand. So that they know, they do not have a surprise when DTSC finally deliver the approval status. So that's my comment.

CO-CHAIR CARROLL: Thank you, Jae. Tod.

PANEL MEMBER DELANEY: Thank you, Chair. I'm just reading the first line in terms of the qualification and certification of assessors and I have been really driven to a couple of words where it says "an individual in responsible charge of conducting." Which when you look at all of the requirements for that individual, we know that no single individual as an assessor is going to be able to do the alternatives assessment for anything other than a very, very simple product.

This following on from this reminds me very much of -- I have a professional engineering license that I have in a number of states. And it reminds me very much of that because I am the principal responsible person in charge, although I have a team of individuals that work under me. And on that basis I would really like to see just one accreditation body to make sure that you would have a

consistency across all these things.

The other thing though that I think you have to do is in 2(a) there have an equivalent of four years of professional experience. That is not sufficient for a management individual to run a AA. It's just not enough time for an individual to be in a management level to know what they don't know so that they have the right people on their staff. And so other than that from a broad thing, if I look at it as being almost like a P.E. And when you read this that's the way it comes out, that you really need only one accreditation. But you are also going to need to have something in there with management experience and you're going to have to have something in there that's larger in terms of time for that individual that's in charge. Thank you, Chair.

CO-CHAIR CARROLL: Thank you, Tod. I have put myself on the list at this point and I wanted to make a couple of points. Particularly going to the idea of conflict of interest, which is expressed in the reg as a financial conflict.

And if you go back and look at the definitions, the bar for financial conflict is extraordinarily low, as low as $2,000. That's hardly workable in these days. The way it's written it appears to me that any organization that in fact ever did business with a company that manufactures a

chemical of concern might be disallowed from being a certifying organization, which would leave out a number of consulting firms that in fact have this kind of expertise.

And so what I would say is, is what you're really trying to get at if you use this is not just financial conflict but conflict of interest? And there are other conflicts other than financial. So for example, would you also disallow organizations that are advocacy organizations that have advocated about particular chemicals over the course of time? I would argue that presents the same kind of conflict as a nominal $2,000 investment in a company presents.

So what I am really coming to is I think the conflict of interest part of this unnecessary. That if you found either one or many potential certifiers, that there are far better ways of determining whether they are qualified to train people to do this work, not do the work themselves necessarily but qualified to train people to do the work. And I think that that part of it, understanding the point of view, that conflict might be more important in the lead assessor, but certainly not from my perspective, in the trainer.

Now I want to take one step downstream. I disagree with Ken in that I think there will be relatively few of these early on because of the uncertainty associated

with it. My belief, and it's only a belief at this point because at this point we're speculating. But my belief is you'll see relatively few of these except for people who have no choice.

And as a result I suspect that they will trickle in rather than, rather than to be a deluge. And the reason for that is I think people would much rather do things that they can control and have more certainty over. And frankly the AA process appears to have a lot of uncertainty associated with it. Because of its nature, because you're doing something new and despite the analogies. And I'm compelled by what Tod said about the analogies to a P.E.

I think you ought to take a 20-year view of this process and have a bit of launch and learn associated with it to recognize that you're going to be seeing some of these trickling in; you're going to see if you're getting what you want. And you will be able, because it's in a regulation -- if you design it correctly I believe you will be able to modify what you want and what you get over the course of time as you see the way this is evolving.

There is a bit of flexibility that has been written into this anyway where you may have alternative approaches to what's been suggested. And that's good. But judging how those alternatives, whether those alternatives are to the point or not is also going to require some

experience and you're not going to be able to tell people exactly the right way to do that.

So I guess if this were mine to do unilaterally the approach that I might take would be either to have one training organization, as Tod suggests, or not worry about it and allow organizations that do this to hang out their shingle and train. And make the state's choke point at a certification exam for an individual assessor in much the same way as there is a P.E. exam.

And from there decide after three to five years whether you're seeing what you need, if you're getting what you want, if there is a further modification that's required. If CE courses are developing along the way to feed this ecosystem that you're creating.

I think it would be a mistake to try to have this perfect on day one. I think this is one that truly lends itself to evolving over a 10 to 20 year time period to get it where you want. Thank you very much.

Let's see, where are we? Kelly, I have you and then I'm going to take Tim, Joe and Art because they haven't spoken yet, Mike, before I get back -- and Ann. I'm going to hold you for a second intervention, Mike, if that's okay. Go ahead, Kelly.

PANEL MEMBER MORAN: Thank you, Chair. Looking at the Department's questions again, given DTSC's limited

resources is the approach sufficient to provide meaningful QA and what steps could we take? I think in general the Department is trying to do the best it can within its resource structure here so the general approach here does make sense to me.

I really appreciate Ken's comments, I guess, in the -- Ken, sort of where all that falls, Ken versus Bill, I guess I'm more in the Ken camp in that I have watched a lot of people go through the P.E. exam process. You know, people are taking huge amount of time off work, they're doing all these things, it's not -- it's very disruptive. And I am not sure that we're ready to go to that high of a bar right away on a new kind of program.

So I can see that strategy but I'm thinking that this is going to be largely development. It's a professional development course. That's really what we're really going to need to do for the first decade. And in that sense I think we need to build a cadre of professionals. And I think we do that better by having one or a couple of organizations that are dedicated to doing that than we do by saying, it's a free-for-all, figure it out. And if we do the it's a free-for-all then the state has to figure out who is certifying, which trainings and all the rest and it still is a mess.

So I guess I just, I tend to fall more towards the

Ken model. But I think that it's not impossible that some day it would move more towards the P.E. model that Bill described so it's not all there.

Also I agree with the requirement for the officer signature. It has been my professional experience that that has been very important. In my work in local government that was exceptionally important in making sure the right level of attention was paid and the right company commitment was provided.

And I also agree, I'm not sure who made this comment, but about how much experience a lead assessor needs. I would really think that the person who is actually running the project might need ten years of experience. You could take away some of that for advanced education. But this is a complicated thing, it covers a lot of areas, and it's not something with a few years out of school is going to be able to be the boss of, as opposed to on the team for.

And then finally actually back to the assessor qualification, one more reaction. Which is that I think that it's going to be really important that people trust the qualifying organization. And that's something we're all kind of dancing around here. And that's not just industry trusting it, it's also the environmental community and others trusting it. The state is going to have the ability to say it's okay or not so they'll need to trust it.

And that's why I think conflict of interest is important. So I agreed with all the first parts that Bill raised about what is a conflict of interest but again I fall on the need to make sure that we have an organization that feels as independent as possible. And that is a little complicated because when I started reading this I was thinking about, well who serves on the Board? And you don't want any advocacy organization to have that role of certifying assessors, that would just be totally inappropriate.

So I don't know exactly how we write that in and what models there exist in the law to make sure that DTSC has the ability to select organizations that are really going to be trustworthy from all different viewpoints. That's I think what we're looking for.

And back to just the main thing. I think that the place where I'm really stuck on this is the fact that DTSC doesn't have enough budget to really do a robust plan review and auditing program. And that's why the previous versions had that third-party review and I understand the basis here. I'm not supportive of the approach the Department is taking now based on what I have heard in terms of the feedback on that.

But what worries me about it is that that's a -- because the Department doesn't have a lot of resources we

wind up with not having a level playing field among folks who are doing AAs. That those who are doing a better quality one versus those who might be doing a more schlocky one, they might get away with it to some extent because the Department just isn't going to have the resources to go through and do everything.

So here again is another example where if the Department had a little more -- since we're falling on the side of, we really want the Department to be doing those QA reviews. We're not wanting to have, to privatize that function; we decided we want to have the Department do that.

The business interest may be to actually make sure the Department has enough funding to do these properly so that there is a level playing field. Because otherwise I think it could end up favoring those people who aren't doing the quality job and that would not be in the interest of the businesses who are competing with them.

And then finally this is a smaller point but I've had some troublesome experience with it, which is the work plan piece of the preliminary AA when that comes in. That is a largely, it's a selection of alternatives largely in a work plan. And I've seen in the pesticide world this does not work so well. The pesticide regulators commonly require work plans out of pesticide manufacturers and you see really talented people who are really smart giving really schlocky

work plans to DPR and then DPR has to spend its staff time telling the companies what to do.

And I'm still trying to figure out exactly what creates that dynamic. Having spoken with the scientists who are submitting these plans I know they're fully capable of submitting very high quality documents and it is a bit mystifying to me why they don't. There seems to be an advantage in playing the process out that the pesticide regulators have to tell them what to do, so they're perceiving that as an advantage.

So I'd caution then in this structure, I think you've done a nice job with the time frames to make it disadvantageous to do that. But to think about, are there other things you could do to advantage those people who do a good quality document and turn it in.

And the only idea I have from -- right now to suggest to you is that the assessors could be reported for putting in -- so that there could be some form of, when DTSC reviews something and sees that either the preliminary or final AA is not of acceptable quality that there should be a function for DTSC to be reporting that to the certification organization and that there be follow-up on that end as well as with the company that submitted it. So thank you.

CO-CHAIR CARROLL: Thank you. I have Tim, Joe, Art and Ann and then I'll go to second round interventions.

Tim, it's yours. Oh, I'm sorry, Dale. It's new, I'm sorry.

PANEL MEMBER MALLOY: Thank you. Would it be all right to ask a clarifying question --

CO-CHAIR CARROLL: Absolutely.

PANEL MEMBER MALLOY: -- before giving my comments?

CO-CHAIR CARROLL: Certainly, go right ahead.

PANEL MEMBER MALLOY: And this comes up in this conversation about -- I guess some of us, I think, maybe have different perceptions of what the facts will be once this program rolls out. So I had a question in terms of whether DTSC has a sense of, number one, exactly how many staff or resources would be available for, A, a review, and then also auditing? And then secondly, how many AAs, assuming you do the two to four product approach, how many AAs are you thinking you might see? Because you are all making certain assumptions and the answer to those questions, I think are, relevant to how useful this process would be.

CHIEF DEPUTY DIRECTOR MADRIAGO: Okay, in terms of your first question about number of staff. I don't think we really have a number right now. That's something we're working on and part of how we work on that is through our annual budget process.

And in terms of the number of alternatives

assessments. I don't have a number for you. And I think that will depend significantly on the particular product chemical combinations that we pick. You know, the range of manufacturers for a given product will vary with the particular product. But it's obviously something we're going to have to be thinking about in our planning.

PANEL MEMBER MALLOY: Thank you.

CO-CHAIR CARROLL: Tim, do you have a statement?

PANEL MEMBER MALLOY: I had some comments and that helped me kind of formulate my comments.

CO-CHAIR CARROLL: Okay.

PANEL MEMBER MALLOY: But if Ken wanted to interject --

CO-CHAIR GEISER: I just wanted to add one clarification. And that is, because the program -- I think the way I remember it, there's a 180 day period between the identification of the product chemical and the time at which the preliminary is due. It isn't just the number but it's the rate at which they come in. After 180 days there's going to be how many or are they all going to come in at once?

PANEL MEMBER MALLOY: Thank you. When you think about this question about the certified assessor and the authority, to me it depends on what you think you want from a program. And it seems to me there's two different ways

one could characterize this program.

One would be what I think of as a reflective approach. That essentially what it's designed to do is get companies to think about these questions, to perform an analysis and to act on that analysis. And that the regulatory framework is all there to provide some push and incentive to it but the regulatory process is not really focused on the substantive outcome itself, right.

And I got the sense that there's a little bit of a hybrid there because, you know, at the start of the meeting I think Odette said how Debbie describes it as, we get the companies to ask the questions but we don't answer the questions, the companies answer the questions. But then we have our regulatory response.

So it seems like you're looking for something more than a reflexive approach where you're just trying to get them to think. Kind of like -- I don't know if it would be appropriate to say but the Massachusetts TURA approach is kind of like a reflexive approach, right? It sounds like we want something -- and if this was a reflexive approach I would say the way this is structured is probably fine with some of the, many of the fine tuning and additional comments that people had made.

If what you're looking for is something more, and I take it that you are, the meaningfulness part, that

there's going to be some oversight of that and some active push to ensure that safer alternatives are chosen when they're available. Or that if they're not that meaningful controls are going to be placed on the continued use of hazardous chemicals.

I'm really concerned about this approach. And not because of the regulations themselves but because, I mean, it's like the emperor has no clothes. We're sitting around this room talking about a comprehensive program for which there is no information collection authority to speak of and no realistic funding available. So this is outside the confines and yet we kind of play around the edges of that. And I just wish there were an opportunity or a vehicle by which this Panel could speak not only to DTSC but to the Legislature and the Administration more broadly.

My sense is that when we say things that people outside this room like, that they'll kind of hitch on to that and send letters to people and say, you should do what the Green Ribbon Science Panel is saying.

I just wish, and maybe we could talk about this later today, that there were a vehicle by which we could address those folks more directly. And if there were a sense on the Panel that there needs to be some additional authorities and some realistic funding for the program that we could make that statement and perhaps that would be

listened to as well as some of the other things that we've said.

But we live in the world we live in and I know, though, I've got to like address the question. So how can we try to make the second-best solution work? Here is my concern about what's going on here is that we have seen programs like this where it's essentially planning programs with an auditing function.

And the one I'm most familiar with is, you know, facility planning and stormwater pollution prevention planning. When I was in practice and when I did work with the clinic at UCLA one of the areas that we knew we were going to find lots of problems with was stormwater pollution prevention planning, which had plenty of guidance documents and lots of trained people to do those plans.

And then when you went and looked at them they were pretty -- many of them were quite, quite deficient. But the agencies really didn't have enough personnel to review them and unless somebody kind of highlighted that and brought citizen suit actions oftentimes things generally didn't happen; there's exceptions to that and I'm rally worried that that's what is going to happen to this program.

So I think maybe a way to help that, given the constraints that we have, is with the -- I think all the suggestions, particularly the ones Ken made about the

assessors, I completely agree with.

I think focusing on the audit program a bit. I think it is unclear to me whether the audit program is designed to engage in substantive review of decisions that have been made or simply another process review. And the reason I'm confused has to do with the regulatory language itself so let me make some specific suggestions about how -- assuming that it's supposed to be a substantive review, that's my assumption -- some suggestions I would make about making that clear.

If you go look at page 41 of the regulations, that lays out the standards that have to be met in the second stage of the alternatives assessment. And by the way, I'm kind of curious why we call it alternatives assessment? The statute calls it alternatives analysis.

But step two is it talks about evaluating and comparing priority -- well there's actually some substance to that because I think the alternatives assessment actually has some connotations with it and some history and tends to stop at kind of the performance matrix part of it. It doesn't really engage in the evaluative aspects that's so unique here. So I think it might make some sense to stop using the older term and to kind of brand list with the new term that's in the statute. But okay.

So step two talks about evaluate or compare

priority product.

Step three says, responsible entities select the alternative that will replace or modify the priority product.

If you want to have an auditing program that is substantive I think there has to be some integration into these provisions of some substantive standards against which the evaluation will be done and the selection will be done. And I will put my money where my mouth is and -- I have said this a lot of times and I have never actually come up with any, I understand that. So I am going to try and come up with some examples of what I have in mind and send it to you. I think other folks, if they're interested in this should also be thinking in those same ways.

The other suggestion I have is actually in the audit provisions themselves that appear on page 65. To clarify whether this provides the Department with the authority to not only review but to require changes or to come to a different conclusion. Right now it says you can audit compliance with Article 5 requirements. Right now the Article 5 requirements are all process requirements mostly. Not all but mostly.

But then number two says you can audit information quality and adequacy of analysis and that to me seems to suggest you're going to get to the substance. If that's

what you're trying to get to, in addition to adding substantive standards that you could assess against I would also make it clear here that that's what is intended in the audit.

The other specific suggestion I have is that in your authority for review of preliminary AAs and final AAs that you also use that language of, is there a deficiency with compliance. And that to me reads kind of like completeness determination or process determination. And if you want to have the substantive ability to require changes or to come to a different conclusion I think it either ought to be in that particular provision or it ought to be more expressing the regulatory response.

Because the way regulatory response is written right now, in a sense it puts us right where we are currently where it's written as if you can ban certain products if you feel i's necessary, regardless of what's in the AA. That's how I read it. But it doesn't give you the authority to in any way encourage the adoption of a safer alternative.

So if you thought there was a safer alternative, maybe even one that was identified in the AA, that was rejected by the other party, it seems to me you have the authority to ban the product the way these regs were written. To maybe put the person on the non-compliance

list, depending on how you write the standards. Require engineering controls for the existing product.

But I don't see any authority the way this is written to actually in any way, either directly by requiring adoption, maybe that's too strong, or indirectly the way the EPA's SNAP program for ozone-depleting chemicals, where you have a separate authority where you can approve acceptable substitutes. So that would be different, right?

So one is require people to adopt a different alternative, which may be too strong an authority for lots of different reasons for some folks.

Or to say, we're going to ban this product and we have a process in line where folks can come and get approval for a substitute for that product. And I think there's lots of experience in the SNAP program as to how that would function and might work. And it's a way, I think, of achieving the statutory goal, which is to not have simply product bans with, you know, kind of a Wild West free-for-all after that that could lead to regrettable substitution but rather an affirmative attempt to guide the marketplace towards safer alternatives. Thank you.

CO-CHAIR CARROLL: Thank you, Tim. Let's sort of review the bidding of where we are here. I have for first interventions, and I think this is correct, I have Joe, Art, Ann and Dale. I have Mike and Meg who would like a second

opportunity to speak and we have approximately 25 minutes remaining in this session. We're going to have to be pretty good about time because there are planes for various people. So taking all that into mind, Joe, the floor is yours.

PANEL MEMBER GUTH: I'll only take 20 minutes, here.

(Laughter.)

Okay, I want to make a brief remark on the transparency issue. You asked a question of whether AAs should be -- redacted AAs should be put on your website and made publicly available.

Ken raised an interesting, you know, countervailing -- I think you should, I advocate that you should do that. Ken suggested that, you know, making these things public might restrict, you know, the depth of analysis that people do because there is going to be scrutiny of it. You know, there are clearly places where you want to create privileges and, you know, protect analyses from disclosure to get, you know, more honest analyses.

But I don't really think this is a good situation for that. I mean, I think program -- for lots of reasons but maybe most importantly because DTSC just has such limited resources that I just think that public transparency is very important here, particularly if we want to think

about these as providing a sentinel kind of function. I mean, if the market doesn't really know what's happening it's not going to work as a sentinel to communicate, you know, to the market, influence the market.

So I really think that I would advocate the AAs should be made public. Redact, they're going to have to be redacted. We need to see that situation. If you don't put them on your website, you know, interest groups are going to request them through a FOIA, they're going to get them and then they'll put them out there. But it won't be as authoritative a disclosure as if it's just on DTSC's website. I think it's a real issue here how the trade secrets is going to work in that the public disclosure of those AAs needs to be done so we can see how that's working.

And then one other aspect of that that I want to highlight is the assessors can develop -- this is on page 38 of the regulations -- their own AA process that differs from the one that DTSC develops. I think companies are developing their own processes now, some have implemented. I think they look at them as actual, you know, business assets that they developed. I have heard people are even patenting those things as business methods. So I guess it's possible to imagine that the AA process that's used itself would be claimed as a trade secret and not disclosed.

I think that would be very hard to stomach, you

know, if we have an AA process that comes out. And not only are the chemicals in the products and the alternatives that are selected or not selected, if all of that is trade secret so it's very hard to penetrate -- but even the process that's used to do the evaluation is a trade secret, you know. So I guess I want to suggest the possibility of saying that an alternative process can be used but it can't be claimed as trade secret. It can only be used if you're going to disclose that so that it can be, at least the process can be evaluated.

CO-CHAIR CARROLL: Thank you, Joe. Art.

PANEL MEMBER FONG: Thank you, Chair. I just want to touch back on the accreditation body, especially the comments that Meg made about perhaps using the UC Extension. I think that's an excellent idea, however I do have some concerns. I think the UC Extension is just excellent on the educational function part of it but I'm not sure that the UC Extension would want to get into the administrative and accounting function of, you know, certification where they would have to maintain -- you know, keep track of people's continuing education.

So perhaps as an alternative and to jump start the process is to have DTSC actually considering forming some kind of agreement or understanding with an existing, established professional organization. I don't know what a

good one is but perhaps something like AIHA, American Industrial Hygienists Association. Something similar to that but product safety specific. That way they would already have the infrastructure and the, you know, mechanisms in place in terms of training, testing and maintenance of certification. Just as a suggestion, thank you.

CO-CHAIR CARROLL: Thank you, Art. Ann.

PANEL MEMBER BLAKE: Thank you, Art, for bringing UC Extension back into this. And Meg beat me to it so thank you for the plug for Extension. In addition to being on the Advisory Board for the Green Chemistry Certificate Program I have also developed curricula and continuing to develop curricula and be an instructor in that program.

Art, I think they do actually have that ability to track training and, you know, they do track that for several certificate programs, I'd have to double-check it. But I think your example of an existing professional organization would also be another option.

Also I am going to implementation again and thinking about examples that we can look at in the more immediate term of how to go about using -- authorizing accreditation bodies both to do alternatives assessments and training the trainers. And since Lauren is not here imagine me with blonde, curly hair for a moment and I will channel

her. Green Screen is currently doing this or is in the throes of doing that and that would be in interesting thing to look at. They are both certifying external bodies to perform Green Screen alternatives assessments -- I realize that is a sort of a smaller version of what we're looking at here, and also thinking about how to train trainers within Green Screen. So that's a very immediate source of information on this committee itself if you could look at.

I would also look at perhaps the Design for Environment alternatives assessment program and how they're going about -- I don't know about their training piece but at least they are certifying third parties. I haven't thought that all the way through but I think Green Screen may be a better, closer option.

CO-CHAIR CARROLL: Thank you, Ann. Dale.

PANEL MEMBER JOHNSON: I thought it was Lauren.

CO-CHAIR CARROLL: I'm sorry?

PANEL MEMBER JOHNSON: That was Lauren.

CO-CHAIR CARROLL: Oh, I'm sorry. Thank you, Lauren. Your hair looks marvelous.

(Laughter.)

CO-CHAIR CARROLL: Now Dale.

PANEL MEMBER JOHNSON: Thank you very much. And I'll keep my hair the way it is.

So as I was looking at this and then listening to

everybody else I think what comes out is that the bones of this will work and it's in the details of everything of how you actually get there. And to me what this is setting up over time is a self-policing type of process. That's what you're hoping it sets up. That, you know, there's a new philosophy that's taking place within industry or whatever it happens to be, but it's self-policing.

And then there's checks and balances along the way so that at least you hope to get to the old 80/20 Rule, that 80 percent of the stuff comes out correct and 20 percent may not be. And that's always, you know, that's kind of the standard that's used for that.

Now there's a couple of interesting things in terms of certification programs. One, there's certification to create credentials, and then there's certification to create a license to do something. And those are two different things. So if I said, you know, here I am, a board-certified toxicologist, that's a credentialing type of thing. But it's what I do in relationship to that internationally that maybe makes me acceptable as an expert in certain areas.

But then there's a licensing part that allows you to do something. You know, I'm a licensed pharmacist. And to do that I have to maintain -- I don't do that but -- in fact I'd be dangerous if I tried to do that. But, you know,

there's -- you know, you have to learn how to spell drugs or something.

(Laughter.)

So we have to be careful in terms of what we're dealing with for certification. Is it a credentialing type of thing or is it a license to do something? And the critical thing here to me is that when you put in an audit, an audit part in DTSC, then the auditor has to be credentialed or licensed in the same way that the people that are doing it. If you don't you do not have the appropriate audit that's actually acceptable. And so that's something you have to be extremely aware of.

But to go back. I think that the aspects of this as its written will work and it's the details that's going to make it happen. And I kind of agree with the idea that this will take place over time. There's got to be some flexibility in it. You're going to learn a lot. But you can't write it so that it's just so overly-restrictive on the front end. Now when you get --

And I want to mention something about conflict of interest because this is something that is just inherent in the whole process. Everybody, and this includes me, everybody who works for a company gets into the product defense mode. And you tend to get into that within the first two months of coming into a company. It doesn't

matter what your field is, you're in a product defense mode. And you could view that as a conflict of interest but it is, in fact, the way it is within -- and it has to be. Why would you hire somebody into a company that isn't, you know, supporting the products and everything else.

And so the whole idea of conflicts is just inherent in this whole thing. And that's why I agree, I agree with Bill that I think you have to just end the whole idea of conflicts of interest because it's just there. It's always been there, you have to deal with that in a self-policing aspect and you hope that it comes out to the 80/20 Rule. To summarize then, if I can count to five, to summarize, I think this will work and it's a matter of just working out the details.

CO-CHAIR CARROLL: Thank you, Dale. I have Roger and I want to -- I want just a short process check. Julie, Rich and Bruce, you have not asked for the floor. Not interested?

PANEL MEMBER CORDS: (Microphone not on.)

CO-CHAIR CARROLL: I'm sorry?

PANEL MEMBER CORDS: (Microphone not on.)

CO-CHAIR CARROLL: All right, I'll put you on the list, thank you, Bruce. Roger, it's yours.

PANEL MEMBER McFADDEN: Thank you, Chair. I'll go quickly here. The first thing is the conflict of interest.

I think at the very least the conflict of interest should be disclosed. So if the assessor has a conflict of interest -- so no matter how you might go it needs to be disclosed. There is a portion where, I think -- I think you're going to disclose the assessor's name as part of this, I believe. Maybe any conflicts of interest associated with that assessor might be kind of a middle point to get away from this economic piece. Because I don't know how you deal with that one.

Secondly, Bob's idea of senior leader sign-off. I kind of like that idea but I might suggest one addition. And that would be liability insurance. Some kind of a -- for instance, professional liability insurance is a normal thing for a professional. And maybe to require that to be in place for your protection.

Ken, I like your idea of the portion of the fee going to the DTSC, though I don't know how that works regulatorily. I don't know if you can even accept it; I don't know how you go about it. But I like that idea.

And then Ann's idea of the Green Screen I think really makes a lot of sense because that's a process that businesses are using today to incorporate into their kind of AA thinking. And so trying to attach to something that's already being embraced in business might be a good thing. Thank you, Chair.

CO-CHAIR CARROLL: Thank you, Roger. Bruce.

PANEL MEMBER CORDS: This is a how do you protect innovation, question in the publication of the, let's say, the redacted form. I assume that the alternative will be named. Here's the problem. Five companies show up as having a chemical of concern in a product of concern in your first round.

Company A comes up with a solution. Through investment and innovation they come up with an answer, the other four don't. How do you protect the information developed by Company A? It's still a free market system. I mean, we still have to be -- I mean, that company should be rewarded for --

MS. HECK: So the way it would work is the company, if Company A believes that the alternative they have come up with is in fact subject to trade secret protection, they make that claim when they submit the AA.

PANEL MEMBER CORDS: Okay.

MS. HECK: The Department independently reviews and sees if it concurs with that determination. And that's how it would play out. So it's neither -- you know, it's neither de facto in or out as a category of information from being trade secret. The only thing that's per se out is this hazard trait information, this odd provision in the statute. So we would -- parties are free to make the claim

and then we would review.

PANEL MEMBER CORDS: Okay.

CO-CHAIR CARROLL: Thank you, Bruce. Okay, Mike, it's yours.

PANEL MEMBER WILSON: Thank you, Bill. You know, when I first read through this I was really struck about how we have -- this represents to me an extraordinary opportunity to build professional and technical capacity in California among a community of alternative assessors, you know, who continually improve their practice and so forth.

I went through the industrial hygiene program at UC Berkeley accredited by the American Board of Engineering and Technology. That cadre of students -- I guess I'm getting -- the point is, what does that capacity look like? What does it look like to build professional capacity? That cohort of students to this day, nine or ten years later, continues to interact. They're in different parts of the state and they all face common problems around protecting workers and also understanding environmental exposures and engineering. And they talk to each other and they get together once a year and they develop a field of practice.

And I guess, you know, this gets to, you know, Tod Delaney's point that what we're struggling with here in a way is that the world of alternatives assessment is not a, there is not a lexicon. There is not a dogma, in a way,

that we teach a certain body of knowledge and then you understand that and now you're certified, bang. It's a field that's developing. It's rife with discovery and inquiry and the need for continual improvement. So that's a, that's a model of professional education versus vocational education, if you will.

I think Tod's point about that -- it's actually -- there's a place in the regulation where, you know, it stipulates the alternative chemical being considered in a number of ways, a number of places. But in fact we all know it's much more complicated than that. There are alternative processes and so forth that involve not chemistry necessarily but engineering, environmental engineering, finance, law issues, questions of relative risk and so forth that are sophisticated and they're complicated.

And so I think it would be expedient in a way to move this field of practice into a private consulting arena. And I would just urge the Department not to move in that direction. That the way we can develop -- again, this is sort of Bill's point about developing a, having a 20 year vision of developing capacity in this developing field. As others have said, driving this as much as we can into the existing educational system in California. In my view of that, that includes the community colleges, the CSUs, the UC system and the UC Extension for that matter.

This is -- building technical and professional capacity is a process that I think can be, can and should be integrated across our existing educational system and it sort of incorporates this process of teaching student innovation that grows out of that. Professional practice, apprenticeship training of sorts, continuing education and research. And students who come to this process and recognize there are fundamental research questions that we need to answer here as we're moving into new materials and so forth. That's long-term capacity.

I guess it gets me back to Art Fong's original point about smart regulation and policy. How does it develop a spirit of inquiry and discovery and educational capacity in the state versus a check box, more sort of regulatory oversight? There's a spirit there that I think that's evoked here and we're getting to in this regulation but we can do more, I think, in invoking a capacity-building educational arena.

And so that's -- again, it's sort of -- there's a level of sophistication, a sort of cutting edge strategy that I think could be -- could be helped, could be inoculated by this process and by the regulations. Of course, you know, I'm happy to help with that in any way that I can. You know, we have a lot of experience in sort of struggling through this process at COEH.

On the conflict of interest side, this is -- one way you avoid conflict of interest is to move this process into the state's educational infrastructure. We did -- you know, one of the things I mentioned earlier around the training of contractors at public works projects. That was privatized previously and based in consulting firms. They were not only conducting the training and training of trainers but they were doing assessments and auditing.

Ultimately it was discovered that they were suffering from conflict of interest issues that diluted their credibility in a way and sort of gets to Dale's point around this sort of product defense. There was an internal conflict of interest that was developing there that we finally discovered but it took several years. I just, you know, want to encourage in any way that we can to move this into our existing educational system for all of those reasons.

CO-CHAIR CARROLL: Thank you, Mike.

PANEL MEMBER WILSON: Thank you.

CO-CHAIR CARROLL: Julie, I see, I see your flag. You haven't spoken yet, I'm going to give preference to you and then I'll touch the others. I would ask the second interventions to be brief, please. Julie.

PANEL MEMBER SCHOENUNG: Thank you, Chair. Mike, I love your optimism. I might be more of a skeptic. I just

wanted to echo an experience that I have and it reflects on Kelly's comment about why do the scientists not bother to write a really well-written plan when you know they could and I think Tim touched on that as well in terms of how to do we ensure quality of these AAs. It would be lovely it got into the academic arena and became something people were really proud of generating and providing to the state.

But I think I would just -- I was remembering a few years ago working with the folks here from DTSC and the pollution prevention group and the source reduction plans that need to get submitted and how frustrated we all were with how poor the quality was. And if we could just even have a mechanism to go back and say, this isn't what we were looking for, can you actually tell us this, this and this, they would have been much more useful.

So I guess my suggestion is I'm not a regulatory writer; I don't know what the right language is. But maybe looking at examples of what didn't work or what doesn't provide a really high quality report such as in the pollution prevention, source reduction mandates and in these other programs around the state and try to find models where it does lead to quality reporting, I would just encourage some background on that if you have the opportunity to.

CO-CHAIR CARROLL: Thank you, Julie. I have three more requests for intervention and I am going to ask you to

take no more than a minute, please. Meg.

PANEL MEMBER SCHWARZMAN: Thanks. This is just specifically pertinent to the issues that have been raised, I'll save the other ones for the later section.

One is to follow up on this conflict of interest issue. I think there is a real difference between the people who are doing the teaching in an accreditation program and the actual accrediting organization and the assessors. So there's three different bodies here that we're talking about and I don't want to conflate them.

The accrediting organization obviously needs to have no conflict of interest, as I believe the assessors. But what that means is no existing financial stake in the outcome of the alternatives assessment or in the way that people are trained to do it.

And that doesn't mean an absence of experience in economic entities. So we want people with experience in industry to be involved in the process of how one assesses alternatives. But the outcome of an alternatives assessment should not advantage or disadvantage the person who performs the assessment, and I think that's a difference.

So in Extension, for example, Ann is an independent consultant who teaches in it. There are many people who have experience, 30 experience in industry, who teach in Extension. But Extension itself doesn't have any

economic interest or experience necessarily in any economic entity.

The second issue that I want to raise hasn't been talked about yet, which is the issue of disputes. And there are provisions in the regulations that allow for disputes to be raised for any action that DTSC takes at any point in the process. And something that's in the summary but I could not find in the regulation itself, probably my own problem, is on page four of the summary, which says that companies can dispute any action. Which to me includes listing of a chemical of concern or listing of a priority product -- designation of a priority product. And that that action is stayed during the dispute.

And so since our goal here is to get to alternatives assessment, and since many of the regulatory responses don't actually hinge on the outcome of an alternatives assessment, the idea that you can put on hold any level of action by the Department during a dispute to me has ramifications for alternatives assessment and their validity and getting to them in the way that we're discussing here. I just want to raise that issue.

CO-CHAIR CARROLL: Thank you, Meg. Ken.

CO-CHAIR GEISER: Quickly just in response, a bit, to Mike's statement about the capturing of the learning that is taking place, because this is such an enormous

opportunity to really explore this idea of a alternatives assessment and to build our collective knowledge and all of how to do this.

I should have paraphrased my earlier statement by saying my learning originally arose out of in 1983 when I worked on the passage of the Massachusetts Right to Know, workers Right to Know bill. And we made no attempt, paid no attention to the market it was going to create for consultants to run in and sort of offer services to management about chemicals used in the production processes.

And it was, as Tim mentioned, a Wild West show. I mean, it was like just a -- there were huge abuses during that period. And I had never fully understood that a regulation often creates a market so we had missed the whole notion. So when we did the TURA program I wanted to really capture that idea and really make that a part of our learning and allow that tremendous flowering of professionals to really be a part of the growth of the program.

And so yes, we actually, the Toxics Use Reduction Planners, we celebrated them and memorialized them and made them very much siblings of the program. To the extent that they created their own association, they had their own awards program. Today they are a very -- and the last piece is that they are a major constituent of the program. So

that when the program needs support in the legislature or when the program needed to be updated they were a very important part of the knowledge and all that came back to the program to really support it.

The use of the university was also valuable and I will -- you know, I'm open here. I think Art's right, professional associations may be a good, a good opportunity as well. But the university turned out to be terrific. It gave the program tremendous legitimacy because the university, as is here the California system, is well-respected so it gave it a kind of embodiment of authority, of a kind of knowledge and all.

But what it also did was it kicked into the normal parts of the university, such that within the University of Massachusetts we began to offer courses for credit for graduate students. And then in my case actually we developed an accredited graduate program in this area so that we were producing and we were getting planners coming back to school to get a degree to go out and do this. So it became a channel for much larger learning and much more feedback so I just want to note that as well. Thank you.

CO-CHAIR CARROLL: Thank you, Ken. Kelly.

PANEL MEMBER MORAN: Extremely quickly. We've had a lot of discussion about conflict of interest and I just want to wrap up by saying I think the Department correctly

created different provisions for assessors and for the accreditation organization. Assessors will all have some level of conflict of interest because they will be paid by the company for whom they are doing the assessment.

That is actually why it is so important that the accrediting organization be independent. And that's the word that I think is probably the most important word to think about. How do we embody independence in the regulations. And the goal of that is to ensure that it's trusted by all of the different stakeholders including the state itself. Thank you.

CO-CHAIR CARROLL: Thank you, Kelly. All right, that brings us to the end of this session and thank you all very much.

We have a break now. I would ask you to be back here by 20 after, please, recognizing there's a little slop in this. We would like to kick off at 10:25 so please be back about 10:20 and then we'll have the final discussions. Thank you very much.

(Off the record at 10:07 a.m.)

(On the record at 10:26 a.m.)

CO-CHAIR GEISER: Okay, let's reconvene here at this point in the morning on the second day to try to pick up any additional comments, any things that you didn't have a chance to say. Bill just humorously asked, do you think

there is any possibility that there could be anything left to say? But I'm guessing that -- not only guessing, I have evidence that there are some lingering thoughts you would have that you would like to provide the Department with in regards to improving the draft that we see.

One thing to note and that is we are back on-line with -- what are we calling it, the web?

CO-CHAIR CARROLL: Webcast.

CO-CHAIR GEISER: The webcast is back on and we've got some 10 to 15 people back listening to us. Thanks to those as well.

CO-CHAIR CARROLL: People who can't sleep in China.

(Laughter.)

CO-CHAIR GEISER: So we have about, we're going to run here -- it's going on to 10:30 here. We'll go for about an hour, a bit longer than that. We'll be leaving some time here toward the end because I'm sure, like me, many of you are interested to hear Debbie and the staff say how they're going to respond to this and what the plans are from here, ad in particular what the plans are for the Science Panel itself. So I want to leave plenty of time for that because that might ensue a bit of a discussion as well.

So why don't we take an hour and see where we are in regards to just anything that you haven't had a chance to

present and want to use this time for. So I see Dale. And we'll start with Dale and then we'll go on.

PANEL MEMBER JOHNSON: Okay, I just wanted to follow-up again on the conflict of interest part of it. And I know that we have some differing opinions at the table here on this particular aspect of it. And I just want to make it clear that I think it's very important that the certification and AAs can be done in-house within a company. Even though there obviously is conflicts of interest and it's stated there could be financial conflicts of interest because a person works there or has stock options or has stock.

But I think it's very important in this kind of program which I view overall as eventually getting to a self-policing type of program. And some of the people with the greatest expertise on any product or any series of things actually are in-house within a company. And so I just want to make it clear that I absolutely support that.

CO-CHAIR GEISER: So I have Ann, Mike and Joe. Ann.

PANEL MEMBER BLAKE: I'd like to pick up on a topic that has come up a couple of time about workers. And I wish I had a better language and I'll think about this, about where to put this in the reg itself. There were some suggestions yesterday about different places where we could

add workers and I wanted to refine that a little bit.

The workers that I have had experience with are people that are using consumer products and there's often the phrase used, "intended use." And the workers, service workers particularly, are encountering consumer products sort of beyond the intended use.

So that's a group of people so I'm thinking about house cleaners. You know, professional house cleaners are dealing with products that are intended to be used a certain way and have a higher exposure to them. Nail salon workers the same thing with higher exposure. So it's a different --

And particularly these are vulnerable populations. Very often immigrant populations that have high exposures, no understanding of OSHA regulations, that those actually apply, and other things like that.

So I'm not sure how to define that but I want that particular group of workers to be considered, in addition to what we're thinking of in terms of like manufacturing workers and so forth. Service workers with exposure potentially to consumer products.

CO-CHAIR GEISER: Thank you, Ann. Mike.

PANEL MEMBER WILSON: Thank you, Ken. I have a couple of reflections on points that others have raised. One was actually Julie's point about, I think it was SB 14 under the Pollution Prevention Program.

As part of the work that we did for the Senate Environmental Quality Committee and its counterpart on the Assembly side, the Assembly Committee on Environmental Safety and Toxic Materials, we evaluated, in our 2006 report actually to those bodies, we evaluated a whole series of voluntary strategies to motivate behavior change within industry sectors. And one of those was SB 14. And I'll just read a couple of sentences from our findings with that program from our report. It said:

> "Under SB 14 the California Department of Toxic Substances Control found that 29 of 40 California firms evaluated in 1998 in the chemicals and allied product sector were significantly out of compliance. DTSC concluded the underlying problem may be that company management lacks commitment to devoting the necessary resources to evaluate source reduction options."

And then our commentary:

> "Without a robust market or regulatory driver most firms seek to avoid the disruption and costs that can accompany technological change, even when such changes are necessary for the long-term viability of the industry as a whole. As a result we

found that policies that could induce technological change were largely absent from voluntary initiatives."

So that's just a reflection on, you know, previous effort from DTSC in this arena.

The second was on Meg's point about the -- which appears on page four of the summary under part G which is the -- that stays any requirement, including posting of information as I understand it, in the event of a dispute.

We have experience with this, again, with your sister agency on the Cal-OSHA where worker health and safety violations are stayed if the company appeals the violation. And so I guess I would encourage or recommend a couple of things. One is to be in touch with your counterpart at Cal-OSHA on what the experience has been, you know, with worker health and safety problems. You know, with that provision that allows the hazard to continue unchecked until the appeal is heard and resolved. I see that as inherently problematic.

And then my question is, is there a way to craft this regulation that incentivizes the other direction? That incentivizes companies not to raise a dispute and to make the corrections, even when a dispute is likely or they dispute, they dispute a ruling that DTSC has or what have you that motivates the corrective action rather than leaving

it stayed. Thank you.

CO-CHAIR GEISER: Thank you, Mike. So we have Joe.

PANEL MEMBER GUTH: Thank you, Chair. I'm going to make a couple of quick comments and then I would like to ask -- there are a couple of revisions I want to ask DTSC what their thinking is about them.

One is there is a provision on the effect of other laws in this draft, which is really different than previous drafts we saw last September and November, and I think this is a vast improvement. I think this is the right, I think what you have here is the right structure. Basically the earlier versions were, if other laws deal with the issue at all then you'll be hands off here. It's really only going to keep you off it if those regulations impose the same degree of regulation protection that this program would offer. And I think that's the right approach so I just want to support that. There are a couple of fine points about that that maybe I'll just talk to Colleen about, you know, off-line.

The second point is on regulatory responses, which we haven't talked about very much. There is a provision on page 48 which defines when no additional regulatory response is required. And part of that is that the selective alternative -- there's a certain standard for impact on

human health or the environment. And then there is a provision on page 52 which defines DTSC's authority for imposing a regulatory response, which is in terms of potential adverse impacts on human health or the environment. But these two standards are not the same.

I guess my first inclination would be they ought to be the same, for a couple of reasons. One is, I mean, these are setting out legal standards. There is going to be, you know, dispute about what they mean and, you know, there will be a whole body of law that will develop what they mean. And if we have different standards we are going to have two different fights about that.

But it seems like they ought to be the same standard. I mean, it seems that the standard for when no additional regulatory response is required ought to draw the same line as the line defining DTSC's authority to impose a regulatory response. So I just think those ought to conform. They ought to be symmetrical definitions of the same line that is being drawn. Because it would be logically odd to have those lines drawn in different places and create a whole or, you know, anyway.

And I guess the suggestion that I offer is the one that you have for defining DTSC's authority for regulatory responses, which is on page 52 in 69506.6(a). It tracks the language of the statute and we'll have to find out what it

means. It's probably the best you can do for now. That's the one I would say ought to just be conformed on page 48. All right. And then my questions -- unless there's a reason that you want to draw them in different places.

MS. HECK: We'll look back and look and see if it makes sense to conform the language.

PANEL MEMBER GUTH: Okay. On page 27 of the regulation, product prioritization, (a)(1) there. The Department shall consider adverse public health impacts from a chemical of concern in a product due to potential exposures during the -- I feel like this is a truncated analysis and I want to ask you why you're truncating it where you are? It's during the manufacture, useful life and end of life disposal or management of the product. What that doesn't include is sort the manufacture of the COC itself. You're just starting at the point at which you're starting to manufacture the product, okay.

I'm assuming that that tracks into the obligations for doing the AA. But, you know, that's just starting the analysis, it's not a full life cycle assessment of the chemical of concern or the alternatives, it's just starting at the point at which it's becoming incorporated into the product so I'm wondering about that.

I mean, there can be lots of life cycle impacts of chemicals of concern and alternatives that come before that.

And also worker exposures, all the problems with bulk chemicals, et cetera. And so I'm wondering just -- obviously it's an easier problem to deal with but also it's not a full life cycle on chemical of concern or the alternative. So I wanted to -- maybe I should just ask you about that.

CHIEF DEPUTY DIRECTOR MADRIAGO: Let us go back and take a look at it.

PANEL MEMBER GUTH: Okay.

CHIEF DEPUTY DIRECTOR MADRIAGO: Particularly I want to take a look at kind of the context set by the statute.

PANEL MEMBER GUTH: Okay.

CHIEF DEPUTY DIRECTOR MADRIAGO: And how that relates to that. Okay?

PANEL MEMBER GUTH: Okay. Because, I mean, you could have differences in the chemicals of concern and alternatives that precede the point at which they are being incorporated into the product that's relevant. Okay.

The second point, maybe along the same kinds of lines, is bulk chemicals, page 36, are removed from the regulation -- the definition of consumer product really. They're removed from the scope of the regulation. And I'm looking at line -- on page 36, line 26. A bulk chemical placed in the stream of commerce that meets the definition

of a consumer product is not included, right, in this article?

A bulk chemical. You know, a barrel or a tank car of chemical, is a consumer product within the definition of the statute. And I understand why you are not focusing on that as a priority now, you're focusing on other consumer products. I think that makes sense for a lot of reasons. But I'm not sure why you would take it out of this regulation. I mean, if the point comes at which you want to deal with, you know, a tank car of a chemical as a consumer product, you have to write a new regulation.

I mean, why cut it out of the regulation would be my question? It's part of the statute, it's part of the prioritization issue for you. I just don't see why it should be carved out of the statute. It sort of sends a signal too really that not only is it a matter of timing and prioritization and letting a program develop but that you're really not interested in that issue.

Then the last example -- maybe I'll ask you, you know, what your thinking is on that?

CHIEF DEPUTY DIRECTOR MADRIAGO: We'll have to go back and take a look at that.

PANEL MEMBER GUTH: Okay. And then a similar thing. The regulation on page four, let's see if I can find this. The chapter does not apply to any consumer product

manufactured, stored in or transported through California solely for use outside California. So it's on lines 22-23. So we're going to do all this work to identify chemicals of concern, products of concern. And if they're manufactured in California, you know, but only some parts of the products are sold in California then the impacts are limited to, you know, the portion of the manufacturing activity that is related to selling products in California, even though there can be a lot of impacts on the environment, on communities, on workers, related to manufacturing the products that are shipped out of the state. And so I guess I want to ask you about that. That also seems like an undue constraint on the program, particularly, you know, obviously workers and communities comes up in that.

CHIEF DEPUTY DIRECTOR MADRIAGO: And so we talked about this a little bit yesterday.

PANEL MEMBER GUTH: Yes.

CHIEF DEPUTY DIRECTOR MADRIAGO: We'll go back and take another look at this. I think both of these, I think part of our thinking was we really were trying to, I guess, in the regulation itself prioritize our work somewhat to those products that are truly being used by consumers in the common understanding of the word. But let us go back and look at both of these again in the context of the statute.

PANEL MEMBER GUTH: I guess the -- just one thing

and then I'm done. On that point, it seems like it might actually be creating some analytical problems. I mean, there's a process that goes on in a plant. You're creating, you know, a million units, some part of them are sold in California. But, you know, it is not naturally divided in the process into parts that are just for California and not so there's going to be some kind of weird analytical judgment that has to be made of attribution that, you know. It just seems like it's creating analytical difficulties also. Anyway, that's it.

CO-CHAIR GEISER: Thank you, Joe. Meg.

PANEL MEMBER SCHWARZMAN: Thanks. The first point, just to quickly pick up on the issue of workers and how we're defining the work place, that Ann brought up.

There is a nice description I think on page 28 of the regulation where it says worker -- line 37 through 39. "Workers, customers, clients and members of the general public who use or otherwise come in contact with the product or releases from the product in the home, work place or other location."

And in support of this I just want to offer some data from the Department of Public Health, the Occupational Health Branch, that looks among many other things, at occupational-related asthma, and has found in looking at those cases that are associated with the use of cleaning

products the majority of those cases are bystander exposures. So in that sense we're all workers. We are all working in work places that are hopefully cleaned and so we are all workers with potential bystander exposure.

So I think sometimes we tend to narrow our understanding of a worker. And looking at the data from the Department of Public Health that doesn't hold up. So that's a good statement but it's not distributed far enough in the regulation to actually have that impact, it's just in that one place.

The second point. Thank you, Mike, for picking up on this dispute issue because I think you said it better than I did about how to motivate the correct -- you know, of course there has to be a dispute clause. And I wasn't advocating against a dispute clause, it's just how it's written and what it's motivating.

And the point that I didn't mention that you hinted at was, how it's written in terms of the burden of proof that seems in this iteration to be, or in this writing to be placed on DTSC before action can proceed. So that was a clearer statement of that.

A third point is something that hasn't been brought up yet. My language is deteriorating as we move through this. And that is in the definition of reliable information; this is page 14 of the regulation. Line 66 has

a whole list of how reliable information can be obtained and the definition of it. And it has to meet one or more of the following criteria and line 15 is US FDA Good Laboratory Practices.

There's a lot of work that's been done on this that I won't go into here but the basic point is that Good Laboratory Practices, it's a certification program that was developed decades ago in response to loosey-goosey practices within external labs or private labs. And it's aimed to -- so it addresses record keeping, what cages -- animal husbandry, those sorts of issues.

It doesn't at all address the quality of the study. How the research questions are asked and answered. There are many, many examples, particularly within the endocrine disruption research literature of places where even, for example, the control animals didn't respond to estrogen. And so if you're looking at whether a chemical has an estrogenic response your control needs to, you know, show that that species of animal that you've chosen --

So all I mean to say is GLP doesn't say anything about the quality of the study. So it's okay, you don't need to exclude GLP practices but it shouldn't be a way of defining a quality -- of reliable information.

A fourth point is I wanted to just echo something that Joe brought up yesterday, which is whether there is a

way that we can bring back into the regulation in a manageable way the issue about notification of change out of a COC. So I just wanted to underscore that. It was something that was unwieldy in the previous versions, but is there a simpler way to at least have the Department get some information when that has happened, would be, I think, enormously useful to the Department.

My last couple of points are something that I mentioned yesterday about non-chemical alternatives and I just want to focus on the page in the regulation that deals with that, which I think is page 9. That can't be. No, it's page 9 of the summary is what it must be, 9 of 16. And this is just language where it talks about -- at the bottom of the page in Step 3, Initial Screening of Alternative Chemicals. I think there is language that needs to be adjusted here. There's really nice provisions in laying out how alternatives assessments should be done that were pointed out by Odette and Debbie yesterday about the question of necessity and I think this is part of how that, asking the question, is it necessary.

From Debbie's previous work within the San Francisco Department of the Environment with the use of herbicides, I use it as a teaching example all the time and people find it very compelling. About how to draw the bounds of an alternatives assessment based on what questions

you're asking. The idea that the City of San Francisco reduced herbicide use by 90 percent and has replaced some of those, the role of herbicide with tolerance of meadows over lawns and use of goats and other non-chemical alternatives is really creative and interesting to me.

Of course they maintained the use of chemical herbicides in places like SFO where you can't just put goats out to, you know, range freely. And so I think that just acknowledges that there are some very appropriate uses of chemicals but they need to be targeted. And that's one of the roles of a creative alternatives assessment. So just to pull in Debbie's past work on that, which I think is a charming example.

Finally --

DIRECTOR RAPHAEL: Meg, I'm sorry, what is the comment on that? Is it that it's not strong enough or that it's --

PANEL MEMBER SCHWARZMAN: No, the comment is where the language is looking -- sorry, page 9 of the summary, Step 3, Initial Screening of Alternative Chemicals. So some of the language focuses on chemicals and there are ways to keep that expansive.

And my final point is just around something that we haven't talked about much, which is who determines whether something is economically and technically feasible

as an alternative. And I know this is a thorny issue and we don't, I won't go into it in great detail. I appreciate very much there is something excellent in the regulation that looks at externalized costs to the public as well as to costs of adoption of a new technology.

But I think great care needs to be taken in wording this so that technical feasibility today -- you know, what's technically feasible today, or infeasible, sorry, may actually be feasible in six months or a year. And that there -- is there a way to write this provision in the regulation to feed innovation and adoption and advantage interesting new technologies that are a little bit more expensive if you look at them through a couple of lenses but not holistically at the outset?

Because the other portion of this is, companies are very good at being able to quantify the impact of technological change within their company, the economic impact. We have many fewer tools of quantifying the externalized costs to the public. And so it's excellent that that provision is in there but I'm not sure how much in actuality those balance sheets will really come out to reflect reality. So can we look at the wording of that in a way that it leaves room to bring forward new alternatives? Thank you.

CO-CHAIR GEISER: Thank you, Meg. And I have now

Bob, Roger and Kelly. Bob.

PANEL MEMBER PEOPLES: Thank you, Chair. Well, first of all I know we have already established that I am not a regular reader of regulations. But I want to assure you I --

CO-CHAIR GEISER: This is changing, Bob?

(Laughter.)

PANEL MEMBER PEOPLES: Yes. I want to assure you I am a reader of these regulations. And to that point I would like to just let you know that on page 29, line 40, the word is "safer alternative" not "saver alternative."

CO-CHAIR GEISER: I thought that was actually kind of cute.

PANEL MEMBER PEOPLES: I did too.

CO-CHAIR GEISER: I noted that.

PANEL MEMBER PEOPLES: I did too.

CO-CHAIR GEISER: It's a saver, it's a saver alternative.

PANEL MEMBER PEOPLES: That's a very trivial correction, all right. So a couple of other thoughts here.

Number one is under the provisions for determination of safer alternatives. There is a line in here that says "and the DTSC determines there is a safer alternative." So I'm assuming that brings up the point it was not identified in the alternatives assessment. So the

question in my mind is, how is that determination going to be made because I don't see anything in here that provides guidance on making that decision?

Is it done by the staff, is it a recommendation by the staff to the director who makes the call on that? Is there an opportunity for a special panel or a committee, maybe a standing committee to deal with these kinds of things. And if that's the case, how would you appoint that committee? What are the skill sets that would be appropriate for that committee?

And that ties to me to a question that the Director asked me at dinner last night and that was, how to use this Green Ribbon Science Panel in the future. And so one thought that came to mind is that as you go through the implementation there are going to be questions that arise and this committee may be a resource to help you think through the responses to those questions.

There may be subcommittees that could be formed out of this committee to deal with discrete issues. For example, things like the judgment of safer alternatives that I just pointed out. And possibly a role in the future as you begin to gain experience on what is working and not working and suggestions on how to further improve the regulations and the process. So those are at least some preliminary thoughts to try to respond to your, your

question.

I'd like to at this point in time also acknowledge -- most of my colleagues did this yesterday and I chose to wait until today to see how the meeting proceeded.

(Laughter.)

And that is to -- I want to acknowledge the staff and the leadership of our chairs who have, I think, made it possible and have evolved this Green Ribbon Science Panel into one that I feel has become very productive and one for which now I feel was a good return on the investment of my time to do all this. I appreciate all the inputs and perspectives of the colleagues around the table that helped make this very productive enterprise.

I do want to acknowledge the DTSC staff and the Director because without what you did it would not have been possible for us to do and contribute what we have so greatly appreciate that.

And then finally I am going to end with a quote, and I shared this with a few folks yesterday. Because I have for a number of years in my current capacity as Director of the Green Chemistry Institute struggled with the complexity of the issues that we are facing for sustainability around this world and beating myself up because I can't figure it out, okay. It's a big intellectual challenge. And that is part of what this Green

Ribbon Science Panel and the staff are trying to do with these really forward-looking regulations.

And I read a quote from Steve Jobs. Maybe it's appropriate that I'm in California and I share this with you. But the quote kind of speaks to the challenge we're facing and that quote was simply: "Simple can be harder than complex. You have to work hard to get your thinking clean to make it simple. But it's worth it --" And that's what I think captures the essence of what we're trying to do so thank you, Chair.

CO-CHAIR GEISER: That was a very nice thought, Bob, thank you. That was very good, very appropriate, I think you're right. Roger.

PANEL MEMBER McFADDEN: Thank you, Chair. I would ditto all the wonderful things you just said, Bob, to everyone around the table and to the leaders all the way across.

I would like to draw attention to page three of the summary in reference to the Responsibility for Compliance. Specifically related to retailers. So I guess what I would ask is that there be more, that there be some thinking here about how specific you are going to define products, I think that the issue around the retailer responsibility here. Because as I understand it there's a tiering of the manufacturer having the primary requirement

to respond, followed by the importer, followed by the retailer.

Retailers carry in some cases hundreds of thousands of potential products which are identified with what we call SKU numbers, which identify very specifically a product. For us to be able to -- I shouldn't say "us" but for retailers to adequately respond to this there needs to be a clear definition of the product. That is, a description of the product so that we know specifically how we're being affected and where we're being affected in this particular case. And I don't see that here.

For instance, there's no reference to time frame on response. Maybe there is, I didn't see it. So the retailer, my understanding is it would default to the retailer if the first two didn't adequately comply. And then they would need to be posted so there's still another kind of piece here that the retailer wouldn't need to respond until there's failure -- that it's on the list of, the failure to comply list.

Is it the product specifically that's listed on that list? May I get a clarification on that. Is that what will be listed? The product, the manufacturer, a SKU number? How will we be able to cross-reference to that?

CHIEF DEPUTY DIRECTOR MADRIAGO: We're trying to be as specific as we can be. We don't -- and in the

regulations it says what we're going to list when we list a priority product. We don't include SKU number because we had gotten some feedback last year about some problems with doing that because of the way those change out. But any suggestions that anyone wants to offer us, whether today or later, on how we can get very specific about that, would be helpful.

PANEL MEMBER McFADDEN: The reason I say this is that if you use product names, that can be very problematic because many companies will have names very similar -- they may have a group of products that are named very similar to each other. And so it can be very confusing for compliance purposes for companies to be able to be in compliance if they're not certain and there is not clarity to this. So I would suggest that maybe there be some thinking around how that, how those will be communicated to the retailer, eventually to the retailer. And then the retailer being able to respond adequately within the time lines that are set.

So the name of the -- this one last thing. The failure to comply list, is it a list of companies and products or just products?

CHIEF DEPUTY DIRECTOR MADRIAGO: The list is going to have as much information as we can have on it.

PANEL MEMBER McFADDEN: Okay.

CHIEF DEPUTY DIRECTOR MADRIAGO: So it will be, it will be -- actually how we'll sort it, I don't know. So it will have a very detailed description of the product. And I will reach out again to our retailer association, which has been quite helpful to us, and work with them specifically on that. So we'll have as much information as we can get on the product, it will list the name and other information on the manufacturer or the importer or whoever it is that has failed to comply. We'll have information about the requirement that's related with the non-compliance and certain other things that are listed.

PANEL MEMBER McFADDEN: Is there -- when the manufacturer or importer submits data are they telling you the names of the retailers in the state of California that they sell that product through?

CHIEF DEPUTY DIRECTOR MADRIAGO: Um-hmm.

PANEL MEMBER McFADDEN: Okay. That could be useful. That could be useful.

CHIEF DEPUTY DIRECTOR MADRIAGO: Yes.

PANEL MEMBER McFADDEN: Because that would help. Because many of those products are to be sold through multiple retailers so --

CHIEF DEPUTY DIRECTOR MADRIAGO: Exactly.

PANEL MEMBER McFADDEN: In a few cases it might be that a retailer might be exclusive to a product but more

often than not there's multiple retailers that are involved in this.

CHIEF DEPUTY DIRECTOR MADRIAGO: Yes.

PANEL MEMBER McFADDEN: So thank you for the clarification. I think all you can do to make that clearer so that there's a real clean handoff there, it would really be appreciated. Thank you.

CO-CHAIR GEISER: Thanks, Roger. And Kelly.

PANEL MEMBER MORAN: Thank you, Chair. I just have three points that I want to make that I think are kind of fairly big picture here.

The first one is that after thinking about this overnight and thinking about why was it I was uncomfortable with the standards, environmental standards, environmental impact standards, and you were so nice to introduce your fellow agencies that participated in this and so forth, I'm realizing that part of the problem here was that the folks representing the environmental side weren't in the room. I had suggested before that you talk to the Water Board and Fish and Wildlife Service. I also had some discomfort with the air, the listing of what defines an air impact. And that was the same thing, you know, maybe these folks weren't at the same level.

Of all of those folks to consult with the ones that you probably want to have in the room from now on are

the Water Board folks. And the reason for that is -- there is actually a technical reason for that, which is that when it comes to non-human impacts of chemicals there is aquatic life and the aquatic environment and there is the non-aquatic outdoor environment, which is largely populated -- the species we most care about are mammals so a lot of mammal testing is done. So there's a lot of mammal data and that plays into the human data. There is very little plant data. I'd love to have us be able to be stewards of plants but I'm recognizing that that's really not quite there.

But the aquatic environment is by its nature different because you are sitting in or swimming in completely immersed in the aquatic environment. And the kinds of species that develop are different and their sensitivity is different because they are getting a much more concentrated exposure to the pollutants.

And just as an interesting example, I recently had occasion to compare for a series of pesticides detected in surface water, hundreds of pesticides, aquatic life standards and the drinking water equivalent levels for human drinking water. In three-quarters of the cases the aquatic life protection standard was a number and it was a lot lower -- well lower and often a lot lower, an order of magnitude or more lower.

And because of that difference and that

sensitivity, and there has been for a long time the use of aquatic life as a sentinel for the environment. That's why you see that in Canada when they're trying to develop preliminary environmental standards, they're starting with aquatic life standards. And we can't capture everything here. We know we can't, we know there aren't the data sets. But there is a much more robust development of this work on the water quality side. So I would urge not only that you consult with them but that you bring them into the room with you as you do the revisions.

And importantly, this is part of how Cal/EPA becomes more of Cal/EPA. And I know that that's a commitment in this administration, to really improve that collaboration among Cal/EPA. I've seen some interesting improvements in that area over the last decade. I've actually seen some tremendous improvements among one of your sister agencies, the California Department of Pesticide Regulation.

And there I want to note, because I think it's actually important for everyone, that they are revisiting their programs to protect surface water quality, which is the main water end point that we'd be protecting from consumer products, not entirely the main one. And although unlike you they aren't writing a big regulation to do that because they already have this law, they are going back and

examining their authorities and making adjustments in procedures and other things. So they're touching on exactly the kinds of things that are the same policy and implementation questions that you all are asking.

And I know this seems very different but it is remarkable to me how similar they are. For example, they're asking questions about the standards. What is it that is the right place where we say, there might be an environmental problem, a water quality problem. What defines that? What defines that specifically related to a chemical in a product? So DPR and the Water Boards are asking that question, you and the Water Boards are asking that question, the same question.

Both of you are trying to establish processes that account for the pathways to surface water, groundwater and through wastewater treatment plants. Again, the same kinds of questions, the same understanding.

Both of you are looking at tools. As you move into the next phase and develop guidance you're going to be looking at tools. How are we going to understand how this product is used in the ways that it goes through. How are we going to screen for those water quality impacts.

There has been some work here. The brake pad modeling was actually the first such modeling that I had ever seen where someone took product and connected it to

water pollution. DPR and EPA have been asking that question in a different way and now DPR has actually tasked a staffer to be working on this kind of, how can we do simplified modeling tools so we can use them for screening. So very, very similar interests. So I think there is much in common in that that kind of recognizing those nexuses is part of what makes Cal/EPA stronger as a group of agencies than it is as individual departments.

I want to move on to two less important points but just -- well, not necessarily less-important. One is that there has been a lot of disconcertion in the world of people who wind up managing things at end of life like the household hazardous waste community.

I have in my email box a whole list -- there's a list from CalRecycle and a list from DTSC of all the things you can't put in the garbage. And they keep hoping that somehow this law will be the way that those things get dealt with. And, you know, they're thinking about -- for everybody who has not looked at those lists lately, fluorescent lights, batteries, electronics, mercury items, paint. Some of these things, reformulation alternatives aren't necessarily the answer, as Meg said earlier. You know, fluorescent lights, at least for now, the technology has some level of mercury in them.

So the alternatives assessment process doesn't

seem like a good fit for getting to the management there. And I guess what I'd ask the Department to think about is to clarify whether this process -- I wouldn't suggest reducing your authorities here, but really to think about what you want to tell back to policy makers about whether this process is the process by which that kind of thing gets managed. Because I think there is some confusion about that at a higher level. Is this the authority we're going to handle those things or is this authority really not a good fit for those kinds of things. In which case the Legislature needs to be thinking about what its policy decision is in that area.

And then just finally I think overall I'm still struck by the challenge of doing this within the Department's resources. And I really hope that there can be a way to fund this so that we have scientists and engineers working on these decisions about how consumer products are designed. And not, with all due respect to lawyers, the lawyers and politicians who will be making those decisions in the Legislature if we don't have an adequately funded and structured program. And I think the Department has done everything in its capacity at this pint in the regulatory structure. So thank you.

CO-CHAIR GEISER: Thank you, Kelly. Rich.

PANEL MEMBER LIROFF: Just very briefly. I just

want to put an exclamation point on Megan's comment earlier about going through the language to look at design alternatives. I think just through and through -- and it sort of picks up on what Kelly just said, I think. I mean through and through, every single line has to address the question of, are we encouraging people to ask the question, do we need it? How do we design out the chemicals?

You know, we tend to have a conversation just like this at the Water Board and Air Board and this is the green chemistry panel. But, you know, there's an awful lot of thinking coming out of the world of biomimicry and bio-design, bio-inspired design, about how does nature do it?

And I just want to make sure that the assessors -- I'm almost tempted to suggest that the curricula might have some component in the training of the assessors of some familiarity with the concept of bio-inspired design and biomimicry.

Because in fact we need to look at that world to see how we can create more efficient products. Products that, that are of reduced toxicity. And one way of reducing toxicity is simply just getting rid of the chemicals. Yes, ultimately fresh designs. Everything is made out of materials, everything is ultimately chemical. But nevertheless you get the idea that, you know, hey, maybe you can accomplish something differently. Sort of like the

whole discussion about getting out of brominated flame retardants. Can we use different materials so we don't need to add any chemicals that are by themselves retardant? And I think through and through these regulations have to be informed by and inspired by that vision. Thank you, Chair.

CO-CHAIR GEISER: Thank you. Tim.

PANEL MEMBER MALLOY: Thank you. I just had a couple of comments. One had to do with the regulatory -- I mean, I have lots of comments but they're kind of, you know, very specific and I'll send them, just as I'm sure lots of other people are going to do that, so I don't want to belabor those. But one kind of over-arching one on the regulatory response.

The statute lists a bunch of regulatory responses as included but not limited to. The regs, when they list the regulatory responses, say "here are the regulatory responses." So I would suggest that you include a backstop, omnibus-type provision in here, that doesn't restrict you further than the regulations restrict you. And that kind of goes along further than the statute restrictions.

And that goes along with this -- I think you might also want to consider a regulatory response that involves some kind of positive aspect of identifying or screening alternatives to make sure they aren't regrettable alternatives pared with your authority to ban a particular

product.

The other thing I just wanted to mention was -- I don't know, Kelly mentioned this in her last part about -- I'm totally fine with lawyers not being involved making decisions, you don't have to apologize. Just as long as scientists stay out of the law, you know, right? Can't seem to get you out of there, though.

(Laughter.)

But what I wanted to say is she brought up this idea that, you know, in order to do this effectively you hope that there's some support for it. And I don't mean to be kind of the guy who, you know, touches the third rail all the time but I honestly have some real concerns about this. And I raised it in that last section and this is our open section and I don't know how other folks come out on this. But I see that there's some real problems in terms of the funding.

One obviously is the effectiveness of this program. Can it actually really work without some sustainable funding for it? But also there's opportunity costs associated with how the agency has been left to deal with this, which is, you're going to have to fund it by taking people, I'm assuming, from other programs, right, and what are those programs? So what is the net effect of that? Do you end up with both an ineffective program because it's

under-funded here and also hobbled a program somewhere else because you've had to steal resources from them. And I think there's multiple things that could be done here.

Just let me say, in terms of our own role to be played. I'll just point out that in the statute not only are we kind of charged with advising the Department on regulations, we're also charged with providing advice to the Department on the implementation of this entire article. With which respect to which, I think, covers thinking about resources for it.

And I heard a few things today. One thing I heard was the way you'll do the resources is you have to see what the budget is. You'll submit the budget and, you know, that'll go through whatever that process is. So I guess one thing I would say is it would be nice to see a budget submission that reflects what you think the actual cost of doing an effective program would be.

Obviously I am somewhat apolitical so maybe I'm just being naive here but it seems like -- it is not apparent to me that anyone has explicitly identified the cost of what this program would be and asked the Legislature to fund it. Whether that's funding through a non-existent general budget or whether it's funding through highly unlikely new fees.

A little depressing but I think, you know, there

ought to be some at least some meaningful and significant effort to obtain that funding. And all right, if you can't get it, folks who are interested both in industry and the NGO groups and all interested stakeholders can't achieve that then you can't achieve it. But I think that that effort ought to be made or else this program, I fear, will become a reflexive-type program as opposed to an interactive, mandatory program.

The other possibility, of course, would be this fee on certification of the accrediting body and then a fee on the assessors. I think that's a great idea for funding that aspect of the program. I don't see how that could fund the other resource-intensive efforts that have to go on under the program. And that leaves us with a program, some type of program fee, which I would suggest -- I believe the Legislature ought to consider it.

My hope is that in the remaining five or ten minutes that maybe we'd hear something from the rest of the Panel because I think the Legislature needs to hear from people who are looking at this comprehensively in the way we are. If we feel that there is a need for additional funding that they ought to hear that loud and clear. Maybe I'm just the only guy who feels that way, that's fine, but I think it's worth talking about.

And then lastly I think this other problem of the

information collection authority is just -- it is so insidious in how it affects many different aspects of this program. And I think it undermines the program when the agency has to come up with what are, I believe, very creative and elegant approaches to dealing with a lack of an authority.

But the idea that we have a new, revolutionary program that begins with the agency and everybody involved with one arm tied behind their back, to me doesn't seem like a particularly wise way to develop public policy. So I think that's another area in which maybe the Panel might want to perhaps develop at least a sense of what the Panel's view is. I made my view clear on both of those and I'm kind of interested in what other folks are thinking. Thank you.

CO-CHAIR GEISER: Thank you, Tim, and thank you for that invitation to others to make comment on that. So I have Bill, Mike and Jae and Julia.

CO-CHAIR CARROLL: Thank you, Chair. I'd like to take us back to the de minimis provision just for a moment please. First of all, I think it's greatly improved in this version. But if I understand correctly, we have lost the intentionality component associated with it. I wanted to point out something that may turn out to be a technical and implementation problem associated with this.

One of the reasons that the original thought

about, talking about intentionally-added materials is because many if not most industrial streams of chemicals are mixtures of material. And particularly they may be mixtures of very similar materials. So when you talk about, when you're talking about getting a chemical to the extent of being 99.9 percent or .99 percent in other cases, that's a laboratory grade, that's not a production grade of materials.

And so particularly when you come to the case of having a chemical of concern that might be, for example, the C8 version of something but C7 and C9 are fine, it's going to be very difficult to provide a C7 or a C9 product that doesn't have a significant amount of the C8 product in it.

This becomes a particular acute difficulty if you don't happen to be the person who is working with the chemical of concern. If you are two or three steps down the line. And for example, to make plasticizers, as an example. By the time you get to that final plasticizer you've done at least two or three previous reactions in the stream, each of which may have side products. Some of which will be removed by purification steps but some of which may be carried forward to the end. So you as a user of this material may have legacies from two or three reactions ago that you're either unaware of or that you certainly didn't intend to put in there in the first place.

So I guess I'm suggesting that if it's not possible to maintain the intentionality clause to say that you're using a chemical of concern because you intend to use it, then there needs to be at least some consideration of a reasonable expectation of the presence of the chemical of concern to avoid having a situation where it simply turns into a huge game of gotcha, looking for 100 parts per million of various chemicals in every product known to man. I just don't think that passes the workability test.

And I think it's something that I'm not prepared to lay out exact language for you right now but I want to flag it as something that will probably show up in later comments but distinctly needs to be addressed because of the nature of the materials. Thank you, Chair.

CO-CHAIR GEISER: Thank you, Co-Chair. We have five people who wish to speak and we have about ten minutes so please keep your comment to about two minutes. Mike.

PANEL MEMBER WILSON: Thank you, Ken. Just picking up on that and this fundamental point that Rich Liroff just made. What we're trying to do here is inspire and motivate change ultimately and behavior change. And that is, we are motivating a paradigm shift from the question of "does it sell" to "is it necessary?" And that's a big, it's a big lift. And so we have created a number of incentives and sort of market drivers within this regulatory

structure.

But sort of getting to Tim Malloy's existential questions about, you know, funding and also -- it was funding and information collection authority.

The third one that he didn't address but that he mentioned earlier was the compliance and enforcement mechanisms that DTSC has at its disposal. Are those aligned properly so that companies are motivated to do the right thing? And if they're not are the penalties sufficient to motivate change? Because we know that as we are trying to motivate change there are always leaders and there are always going to be laggards and there's going to be a lot of people in-between working on the calculus of where they're going to go.

And maybe we are uneasy with strong regulatory tools as we're launching this program. But I would encourage the Department to look with very clear eyes about the need for strong tools to protect and support those companies that are leaders and that don't want to be undercut by laggards.

The problem with a weak regulation is exactly that, that it makes it uneasy for the leaders to step out because they're worried that the laggards are not going to be penalized, if you will.

And I'll end here just with an example that in the

California textile industry we had a real problem, particularly in Southern California, with sweatshop labor that was undercutting a domestic textile industry in California. And it was Pete Wilson that organized an launched a targeted enforcement program that consisted of the Division of Labor Standards Enforcement on wage and hour violations, Cal-OSHA on health and safety and the US Department of Labor on child labor violations that launched targeted sweeps through Southern California to identify those companies that were undercutting legitimate California firms.

And that was a -- that program, you know, had an effect on the California economy that I think was positive and it was also a strong enforcement regulatory component that was launched by a Republican Governor. So I would encourage the Department to look at those everywhere we can within the regulation. Thank you.

PANEL MEMBER SCHWARZMAN: No relation?

PANEL MEMBER WILSON: Yeah, no relation, Pete Wilson. No conflict of interest. He is not a brother-in-law or a brother. Thank you, Meg.

CO-CHAIR GEISER: Jae. Briefly, briefly.

PANEL MEMBER CHOI: Thank you, Mike. I guess you covered the laggard versus leader, you know, in every regulatory environment so I skip that remarks.

My remarks, in overall the draft which is, you know, 68 pages, you know, I think is a tremendous job that the DTSC team did. You know, with this kind of a page, which beats all of the IRS documents and Homeland Security, et cetera.

(Laughter.)

But regarding Tim's remarks that he wants to hear from, you know, other members here. You know, in the private sector the last five to seven years, you know, we always experiencing still, because of economic situation globally, that we are fighting, you know, every minute in terms of resourcing. You know, head count, et cetera, no question about it.

One of the criteria that I see that really stands out here as a result of, you know, the same kind of resource constraint at DTSC. Which, you know, I think really to me is, you know, DTSC has really innovated in a way that outsourcing -- considering outsourcing. Considering -- you know, try to not cover or include the regulations that are covered by other agencies, okay. So that is a good start.

Because once we try to concern too much about which area we had to cover more and more, et cetera, then I think the complexity involved, as Bob brought in Steve Jobs' quotation, the simplicity is real important. And also using, utilization of website. In all these innovations I

can see every section of the 68 page so I really congratulate that.

So in terms of head count our resourcing is always there, I think, you know. So I don't have solutions, Tim, but I think we needed to innovate, DTSC as well as the state of California. And then try to mobilize the talents, you know, you have available. I think otherwise, I mean, you have two decisions, whether we're going to go ahead with this or we cannot, you know. So that kind of a, you know, live and die situation. I think innovation is in the requirements and to mobilize your talents. Thank you.

CO-CHAIR GEISER: Thank you for a good point, Jae, very good. Julia.

PANEL MEMBER QUINT: I just wanted to respond to Tim. I fully support the need for more resources to make this a sustainable program within DTSC, which is what I think it has to become. I mean, this has been a great effort. We all applaud particularly this latest version of the regulation and all the hard work that's gone into, you know, to getting this product.

But really, I mean, the tough part is ahead. How do we make this happen? How do we implement it? How do we give DTSC the experience that they will need in looking at this new -- This is a new initiative. Nobody has done this before, California is the first.

And I would like to find out if this -- I'm on another scientific guidance panel for the bio-monitoring program. And as a panel we did write in support of the need for continued resources for that program. And it was legislatively created and we were able to do that without violating Bagley-Keene.

So if I don't know if, you know, it's the wish of this group to do that kind of a support letter but I think -- and I don't know if it's possible, that's the legal question. But I just want to go on record that I think that that is something that if people are willing that we should do, if that's what we feel is needed here.

CO-CHAIR GEISER: Thank you. This is kind of going to bleed over a bit into the last section here where we ask the Director to sort of say something about what happens next so I encourage you to continue to make those comments. We have Rich and Meg left.

PANEL MEMBER LIROFF: Two points quickly. First just to add on what I said before about biomimicry. There is in fact in the last two years a program out there that provides certification in biomimicry. That's not exactly the right word, bio-inspired design. So certainly there are curriculum elements that have been developed over time that arguably could be integrated into UC Extension or whatever, whoever ends up doing the accreditation.

On this issue of budget and budget advocacy I just want to harken back to some ancient experience of mine. I was on the EPA Endocrine Disruption Screening and Testing Advisory Committee in the late 1990s and, you know, we came up with this very ambitious program for what US EPA should do about developing screens and tests for endocrine disruptors. And it was ambitious. And it was an environmentally inclined federal administration at the time but they came in with a budget that was basically sorely lacking in the resources necessary.

And the way we worked it at the federal level was, in fact I was at World Wildlife Fund at the time, and we teamed up with the American Chemistry Council. And we both went in and said to the Legislature, look, you know, more resources are needed. And I think we were successful in adding to the resources that the federal EPA had requested. Because the federal EPA was constrained in terms of, you know, what they could publicly say about what they really needed. I mean, it was the President's budget driven by the Office of Management and Budget.

So I would suggest that there may be some opportunities. I don't know exactly how the legislative process works here in California. But if necessary I think members of the Panel, if they're strongly moved and they're California citizens, I guess, to lobby the Legislature. I

don't know if I'm off the reservation in saying all this. They probably should. If the program needs resources then the panelists should get in the trenches and say so.

CO-CHAIR GEISER: Meg.

PANEL MEMBER SCHWARZMAN: Thanks. Two brief points. One is just to support Tim and Julia, and I think if I understand what Rich is saying. And I'm inspired by the experience on the bio-monitoring panel, which is a similarly legislatively-created panel and subject to Bagley-Keene and all that. And there could be more discussion with our legal folks and stuff off-line about how something like that happens.

And also it's interesting for me. You know, there is going to be an Assembly hearing on this and they have asked several members of the Panel to testify as individual members of the Panel about our experience on it so it's interesting for me to hear that -- I would never represent consensus but that there is a bunch of discussion about this and I think that's something that we can relate to the Legislature in that setting.

On Bill's point about how de minimis deals with impurities. I think he raised a very valid point and I see a potential solution to it. So mixture is a reality in terms of commercial products and impurities are an equal reality and sometimes the biggest problem. So the disease

burden from the use of Agent Orange was from an impurity, namely dioxins. So they are not just -- "impurity" sounds incidental and from a health and environmental standpoint there can be non-incidental. That's the reason for the low level of a de minimis exemption, which I fully support.

So the solution I think lies in how the chemical is identified when DTSC chooses a chemical of concern and identifies it. And so we have dealt with this question a little bit or we have encountered this issue in developing Plum, the database I referred to yesterday.

So in looking at -- just as an example list one of the lists that is in Plum is the Stockholm POPS list. And because of the methodology we used in generating the list we took a very, we kept meticulous, I can say because it was the chemist who did it, records of any changes that we made to the original list. And they are all on the main page of that list on the website so that everyone can see it under "modifications to the original list."

And as an example with the Stockholm POPS convention, they listed two isomers of brominated flame retardants. One is BDE-47 and the other is BDE-99. And those are very common ones and they were singled out by the Stockholm Convention.

However, when you look at the commercial products, they are all mixtures. And so the language here is we

understood the intent of the convention to include other isomers of PBDEs besides those for which specific cast numbers were given such as mixtures of isomers in commercial material. We therefore included the following isometrically undefined compounds that are hepta-bromo, hexa-bromo, penta-bromo and tetra-bromo biphenyl ether. So I think that point is a critical one and that the Department can successfully address it in how compounds are identified as chemicals of concern.

CO-CHAIR GEISER: Okay, we have just maybe two minutes, Joe.

PANEL MEMBER GUTH: Okay, I'll use less than that. I just want to respond to Tim's request for responses to the argument he's made.

You know, I think resources are obviously a problem. But, you know, there are other problems that are very large also. I mean, the Legislature didn't really enact a comprehensive chemicals policy here. There are enormous problems with DTSC's inability to collect information, with data gaps, with transparency, the trade secrets. Regrettable substitution, you know, is a problem that's going to continue.

So I don't -- I think that this is a very good implementation of AB 1879 but that there are problems in that statute that need to be addressed to really -- for the

Legislature to actually create a comprehensive policy here and resources is part of it. So I guess that's how I would frame the problem.

And so it may be we're stuck with running this as a pilot to see how it works, to show that it can produce something, so people can be on-board with it. And then at that point think about what it takes to really make it a complete chemicals policy.

CO-CHAIR GEISER: Thank you, Joe. And thank you, Tim, for raising that issue of how we might use the Committee as well.

This sort of I think wraps up the time that we had allocated for kind of a general discussion about anything that was left, not covered. We really appreciate the patience and direction, discretion I should say, of the Panel in focusing on these three questions that the Department really wanted us to focus on. But we also wanted to provide time for more general discussion and I think we've had that and that feels quite good.

At this point we're kind of wrapping up the morning. I want to turn this over to the Director and her staff to sort of talk in particular about, you know, what are their next steps or particularly those relevant to the Panel.

But I hope, Debbie, you might also say something

to what you think of this idea of the Panel actually engaging in some kind of statement of support or whatever. We, I think, acknowledge that people have dedicated a lot of time to this. I think it's largely because many of us are very committed to making sure that this program is successful. And now, I think, might be successful in word, it needs to be successful in implementation. And so, you know, I think anything you might suggest we might do to support you in that area might be a good idea.

I think what I'll do is turn this over to you and then maybe at the end turn it back to Bill and I just to say a few comments toward the end here.

DIRECTOR RAPHAEL: Thank you, Co-Chairs. So what I am going to do in the next ten minutes is start off letting Odette tell you some logistical sort of next steps in terms of the reg process itself and what will come out of that. And then I'm going to go up about 20,000 feet, but not quite. I want to talk a little bit about my charge to you in the next two months and in the next two years. But I'll start with letting Odette take it.

CHIEF DEPUTY DIRECTOR MADRIAGO: Okay, thank you, Debbie. And thank you to all of you, you have given us some very helpful input on our three burning questions as well as some other aspects of the regulations.

In terms of next steps, as Debbie explained

yesterday, this is the informal draft. So other than the Bagley-Keene rules that surround the meetings of the GRSP, we don't have a lot of strict rules that affect how we interact with stakeholders. So for the next month and a half or so we are expecting to have a lot of meetings with individual stakeholders, expect to get in a lot of written comments. I'm hoping that a lot of you will send in your individual written comments to us.

And then we will again have our internal, very robust policy discussions within the Department and decide what changes we need to make as well as a lot of tweaky little improvements, some of which you've pointed out today.

Then we will go into the formal Administrative Procedures Act process for adopting regulations in California. And so then we will have an official draft of the regulations along with a lot of supporting documents, in particular a very detailed Statement of Reasons. Those will be publicly noticed and we will start a 45-day public comment period. Towards the end of that there will be a public hearing. Once we get those comments then we will look to see if we need to make further changes. If we do then we will probably have a second -- we will have a second comment period if we have to make substantive changes.

When we get to the end of the road where we are no longer making substantive changes and we feel this is it,

we're ready to make these our regulations, then we will go to final adoption. The regulations become officially effective 30 days later. But given the nature of them a lot of our work can begin well before that in terms of implementation.

In terms of timing we're looking at some time in the first quarter of next year to begin the official 45-day public comment period.

In terms of concluding the process and having the regs become final we're looking at either summer or fall. And that is going to depend upon whether or not we do need to have a second 45-day public comment period.

And I think that's about it. Debbie, did you want me to address their question about providing input to the Legislature or did you want to address that in your remarks?

DIRECTOR RAPHAEL: Go ahead.

CHIEF DEPUTY DIRECTOR MADRIAGO: Okay, all right. So I'm going to primarily address this maybe from a legal standpoint and Colleen may need to jump in here. I think there are Bagley-Keene constraints in terms of how many people actually sign on to a letter. It certainly needs to be, you know, less than a quorum, I believe. Colleen is nodding.

And just keep in mind. One of the things that happened last year is that when a group of you, even though

you are well less than a quorum, submit a letter to the Legislature or elsewhere, it gets viewed as being the consensus opinion of the Panel, even though it's not. So I just caution you to be cognizant of that fact, whether you're submitting comments to the Legislature on funding issues or when you're submitting comments to us on the regulations themselves, you know, out of respect for your fellow colleagues on the Panel.

So I think probably, you know, to the extent that individual members want to provide their feelings about the need for funding for this program. Meg's suggestion that anyone who has been asked to or who wishes to provide comments during the Legislative hearing on December 8. Again, providing those comments as individuals. That's certainly a good avenue to do that and you can provide individual letters. So I'll let Debbie -- oh.

MS. HECK: I would just echo Odette's sentiment that the cleaner and gives rise to fewer negative perceptions approach is certainly to proceed as individuals, given the Bagley-Keene constraints and the fact that there's no explicit authority for that type of action in your charge. So the closer you stay to the explicit authority in the statute, which is to advise the Department when you work collectively as a body, the better off you are.

So when you depart from that I would say, less

concerted action. Individual actions where you speak for yourself. Then you don't have to worry about Bagley-Keene appearance problems or this perceived consensus where there isn't one, problem.

DIRECTOR RAPHAEL: Thank you. So in the next two months. Odette talked about the fact that this is an informal reg process. And Julie asked early on yesterday, what does that really mean? And for me it's such a gift because it's a time -- it means that if you want to come talk to us you can do it as a stakeholder, as an individual, and we can have a robust discussion back and forth. You can say, what were you thinking and why -- I see it a different way. So it's a wonderful opportunity for our reg writing team to have some robust discussions still.

I would like to ask you to do something that I ask all the staff who report to me in my capacity as director to do and that is to come with solutions, not just problems. And so some of you had said that. You said, well, I'll get back to you with how you do it. I would like to invite you to really help us in that way.

So for example, when I hear Meg and Bill go back and forth about the intentionally added and think that there is agreement or not agreement, I still don't know what the answer is listening to them. And so I would like to ask that either they or anyone else give us an idea of how we

can achieve the end.

One of the benefits to spending a day and a half with you is that you really understand deeply what we are trying to accomplish. And so you also understand some of the policy calls that have been made and you understand our constraints. And hearing you in your own words speak back to us what you've observed tells me that you deeply understand where we're all coming from, so I don't think there is any mis-communication here. So take that as my vote of confidence that you understand the problems we're trying to address and come back with some suggestions to them.

Sometimes in your comments you ask us, you address it in terms of a question. Are you trying to do this? This seems like a good idea. So we have really done our best job here so we need your help if there is something specific and that would -- you know, that advice or request is to every single person in this room or listening on this webcast.

I think that's really important, especially before we get to that formal process. Because now is the time, you give us language and we get to say, well that's confusing, or what did you mean, or did you realize that has an unintended consequence. We can go back and forth. Let's not waste that opportunity in the next six weeks. It's a very, very wonderful opportunity.

In terms of resources. I think Jae really said something that, you know, this idea of looking at existing resources and trying to be innovative. And I have tried very hard in the last month or so to think about what's in my power as director to do. Because when I look at the funding situation for DTSC, it's dismal. It is much worse than I understood when I became director. I had no idea. So I just want to put this out there. It's truly, it's truly robbing Peter to pay Paul.

And I don't know that we can keep paying Paul because we've got to do some, what the Governor calls "genuine inquiry." This idea of taking a look at our statutes and what our authorities are now and can we give up anything? So we have some very serious questions to ask as an agency, even if green chemistry weren't on the table.

So because it is on the table and it's deeply important to this administration, and to the Department itself who feels a big investment in this -- I have been trying to look around and figure out, how can we find and tap into some of those other resources? So when Roger says, you ought to talk -- I think it was you, I don't know who told me, Goggle. You know, you ought to talk to Google, you know. Great, help me do it, you know.

The other place I'm looking at right now very seriously is EPA. I had a wonderful conference call with

Steve Owens who will be leaving at the end of the month but also Paul Anastas and Jared Blumenfeld. So I have got commitment from all three of them to look at real resource help for us. They see California as very much the proof of concept of a lot of where the green chemistry initiative, using regs to drive innovation is hitting the road. The first place.

And so they have committed help. Whether it's looking at their ACToR database, whether it's engaging DFE, whether it's giving us access to toxicologists or designing guidance documents for an AA, you know, outside of the National Academy process. So I am definitely reaching out to that as well.

So when I ask you to bring me solutions not just problems, I mean that in term of resources too. This is -- you know, you're not my board of directors in that sense. You are certainly our advisory body and so ideas for ways to get access to other resources, whether they come from industry people who are so -- I mean, I just met the most phenomenal leaders in industry in industry in the last four and a half, five months of me being director. But it is so inspirational to me and makes me realize how much knowledge there is out there to help and aid the Department.

So I would ask each of you to think about what kind of resources and help you can bring in a real way. So,

I mean, that this person is willing to fund a contract or this person is willing to do a workshop. Whatever that thing is that can help us.

When I think about the role of the panel. Again, there's resource limitations. It's expensive to bring all of you together, I have to say. I mean, you know, we fly you in, you stay at a hotel. We don't feed you but we give you water. That's the cheap part. So anyway -- and so clearly I don't want to waste your time. And I am very happy to hear the comments that people feel like this isn't a waste of their time and I really don't think it is.

And also I want to make sure that the Department gets the most out of you guys as I can. And I have to say, we've done a pretty good job of that. Odette is very good at getting things out of people and she's done a good job. As are the co-chairs on that.

So when I look future, in terms of the reg itself my sense is, unless there is something very radical that comes up out of the interaction with stakeholders where we discover that there is a severe unintended consequence or a missed opportunity that is very significant, I can't imagine that we'll have another face-to-face on the reg.

What I could imagine is that we have a phone meeting on the reg. So that probably would happen around, I don't know, sometime in the APA process. But I don't know

if that's the right time or the legally appropriate time. But that's -- I'm not thinking there will be a face-to-face on the reg unless something really unusual comes up that I'm not seeing right now.

After the reg is working its way through the summer and it's time for us to look at how do we do this and what does it mean to put guidance documents together, what does it mean to create a certifying body. I think it would be wonderful and I fully expect and hope that you will engage. I mean, if we're talking about the university extension programs or a professional organization they should come and do presentations. We can open up the structure, it doesn't quite have to be as formal, you know, kinds of things when we are talking about how we implement. So I am really looking forward to that.

I will also be looking at the makeup of this body. Are there voices that are missing, perspectives that are missing? I'm not giving anybody permission to leave just yet but I will take those under consideration as well.

So my sense is, from a resource capacity, is that we might, we probably could afford one face-to-face a year. There will probably be phone meetings, committee meetings when we're not doing, you know, such a formal regulatory process. It could be that the committee has subcommittees. I don't know if it was Dale or Robert that was saying that.

You know, that that might be a really good use for this as well. And so I'll be looking to my co-chairs for their advice, assuming they're willing to keep on with us on this.

So, you know, in closing I have to say that I am very honored by the feedback that we've gotten. Hearing words like "creative, smart, innovative, optimistic." Those are lovely words to hear. For all of us to hear, not just for me. And I shared those with the Secretary of EPA just to let him know how the dialogue was going.

Clearly, as many of you have said -- what I take away is the bones are good but there's details that need to be worked out. We don't want to have unintended consequences, we need to make sure that this is workable for people and workable for our agency. So I hear that loud and clear and as you work with us to bring us those solutions and those options, those specifics. Those will be well-received.

We have our work cut out. I think it's an incredibly exciting time for the state of California. I guess that's, you know, in this bleak economic environment there's all sorts of articles talking about how we as a state are very hard on our businesses. And I would say that if there is one thing the Governor has told me is that if what this does is drive business out then we have not succeeded. And so it is very much our intention to think

about ways to do this in a way that rewards innovation, that creates a level playing field, that I heard over and over again, and that is truly workable and meaningful.

So with that, those are our marching orders and we are moving forward and I thank you all so much for your help.

CO-CHAIR CARROLL: Thank you, Chair. And I want to thank the Department, the Director, all of you and all of you in the audience who have come and listened for a day and a half and those of you who submitted public comments, to the few stalwarts on the web who have hung in there with us. And that's just for this meeting.

And remember, this is sort of at the end of, what, a three year process. So we have come a long way with each other. We have actually come to the point of being a reasonably functional group despite the fact that we come from very different backgrounds.

So I'll thank you once again for your investment in the committee and for your tolerance of me personally as a chair, thank you.

(Laughter.)

CO-CHAIR GEISER: And I'll likewise say the same. It's been a great pleasure and certainly an exciting ride that we have been through here. Three years. There were moments back there, maybe a year ago, where it was looking

pretty tentative and difficult and I wasn't sure where we were going. But I think we pulled it through and I think we have been very significant in making this draft and this enterprise a real contribution to California.

There is much that has to be done from here on, you're totally right, to really make this work and all. I think that I speak for Bill and I in wishing you great success with it.

We -- I don't know, I'm talking to Bill about our continuation here. But the fact that you want to continue the committee, the Panel's work I think is terrific. And I'm hoping that everyone here would continue to want to be on this and working with us.

And with that I would just sort of salute all of us and maybe ask for a big round of applause for everybody here and all the hard work we have done.

(Applause.)

CO-CHAIR GEISER: We stand firmly adjourned.

(Whereupon, the Green Ribbon Science Panel Meeting was adjourned at 11:54 a.m.)

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CERTIFICATE OF REPORTER

I, RAMONA COTA, a Certified Electronic Reporter and Transcriber, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Department of Toxic Substances Control Green Ribbon Science Panel Meeting; that I thereafter transcribed it into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said meeting, nor in any way interested in the outcome of said matter.

IN WITNESS WHEREOF, I have hereunto set my hand this 9th day of December, 2011.

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